CANADIAN THESES ON MICROFICHE

THÈSES CANADIENNES SUR MICROFICHE

National Library of Canada
Collections Development Branch

Canadian Theses on
Microfiche Service

Ottawa, Canada
K1A 0N4

Bibliothèque nationale du Canada
Direction du développement des collections

Service des thèses canadiennes
sur microfiche

NOTICE

The quality of this microfiche is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us an inferior photocopy.

Previously copyrighted materials (journal articles, published tests, etc.) are not filmed.

Reproduction in full or in part of this film is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30. Please read the authorization forms which accompany this thesis.

AVIS

La qualité de cette microfiche dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de qualité inférieure.

Les documents qui font déjà l'objet d'un droit d'auteur (articles de revue, examens publiés, etc.) ne sont pas microfilmés.

La reproduction, même partielle, de ce microfilm est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30. Veuillez prendre connaissance des formules d'autorisation qui accompagnent cette thèse.

THIS DISSERTATION HAS BEEN MICROFILMED EXACTLY AS RECEIVED

LA THÈSE A ÉTÉ MICROFILMÉE TELLE QUE NOUS L'AVONS REÇUE

Canada

NL 339 (r. 85/06)

National Library of Canada / Bibliothèque nationale du Canada

Ottawa, Canada
K1A 0N4

13

TC –

ISBN 0-315-21307-2

CANADIAN THESES ON MICROFICHE SERVICE – SERVICE DES THÈSES CANADIENNES SUR MICROFICHE

PERMISION TO MICROFILM – AUTORISATION DE MICROFILMER

• Please print or type – Écrire en lettres moulées ou dactylographier

AUTHOR – AUTEUR

Full Name of Author – Nom complet de l'auteur

MARILYN KATHLEEN EVANS (MacARTHUR)

Date of Birth – Date de naissance
SEPTEMBER 8, 1953

Canadian Citizen – Citoyen canadien
☑ Yes / Oui ☐ No / Non

Country of Birth – Lieu de naissance
CANADA

Permanent Address – Résidence fixe
18908 97 AVE
EDMONTON, ALBERTA

THESIS – THÈSE

Title of Thesis – Titre de la thèse

PATERNAL ATTITUDES RELEVANT TO BECOMING A FATHER OF A HOSPITALIZED PREMATURE INFANT

Degree for which thesis was presented
Grade pour lequel cette thèse fut présentée
M.N.

Year this degree conferred
Année d'obtention de ce grade
1985

University – Université
UNIVERSITY OF ALBERTA

Name of Supervisor – Nom du directeur de thèse
DR. J. KIKUCHI

AUTHORIZATION – AUTORISATION

Permission is hereby granted to the NATIONAL LIBRARY OF CANADA to **microfilm** this thesis and to **lend** or **sell copies of the film.**

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

L'autorisation est, par la présente, accordée à la BIBLIOTHÈQUE NATIONALE DU CANADA de **microfilmer** cette thèse et de **prêter** ou de **vendre des exemplaires du film.**

L'auteur se réserve les autres droits de publication; ni la thèse ni de longs extraits de celle-ci ne doivent être imprimés ou autrement reproduits sans l'autorisation écrite de l'auteur.

ATTACH FORM TO THESIS – VEUILLEZ JOINDRE CE FORMULAIRE À LA THÈSE

Signature
Marilyn Evans

Date
April 23, 1985.

NL-91 (r. 84/03)

Canada

THE UNIVERSITY OF ALBERTA

PATERNAL ATTITUDES RELEVANT TO BECOMING A FATHER OF A HOSPITALIZED PREMATURE INFANT

by

(C)

MARILYN EVANS (MacARTHUR)

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF NURSING

FACULTY OF NURSING

EDMONTON, ALBERTA

SPRING 1985

THE UNIVERSITY OF ALBERTA

RELEASE FORM

NAME OF AUTHOR	Marilyn Evans (MacArthur)
TITLE OF THESIS	Paternal Attitudes Relevant to Becoming a Father of a Hospitalized Premature Infant
DEGREE FOR WHICH THESIS WAS GRANTED	Master of Nursing
YEAR THIS DEGREE GRANTED	1985

Permission is hereby granted to THE UNIVERSITY OF ALBERTA LIBRARY to reproduce single copies of this thesis and to lend or sell such copies for private, scholarly or scientific research purposes only.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

(Signed) Marilyn Evans

PERMANENT ADDRESS:

18908 97 Ave
Edmonton
Alberta

DATED April 23, 1985.

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled PATERNAL ATTITUDES RELEVANT TO BECOMING A FATHER OF A HOSPITALIZED PREMATURE INFANT submitted by MARILYN EVANS (MacARTHUR) in partial fulfilment of the requirements for the degree of Master of Nursing.

Janne Kituchi
Supervisor

Helen Simmons

R W Cockerill

DATE April 22, 1985

ABSTRACT

Until recently, little consideration has been given to paternal role development during the childbearing period. The purpose of this exploratory descriptive study was to increase present knowledge and understanding about first time fathers of hospitalized premature infants and early paternal role development.

A predisposition to actual parental role enactment has been considered to be an individual's attitude regarding parental role attainment. In this research project, paternal attitudes relevant to becoming a father of a hospitalized premature infant were studied in terms of the common beliefs, feelings, behavioral intentions, and actions which reflect such attitudes. The father's relative ease or dis-ease in the transition to the paternal role was also examined. Concepts from role theory and attitude theory formed the conceptual framework for this research study.

A research questionnaire was developed to measure demographic and psychosocial variables and paternal attitudes relevant to becoming a father of a hospitalized premature infant. The self-administered questionnaire was given to a convenience sample of 40 first time fathers of hospitalized premature infants at two weeks postpartum.

Frequencies and cross-tabulations were performed on the data to describe the sample in terms of the identified demographic and psychosocial variables.

Factor analysis was performed to identify what factors were actually being measured by the attitude scale. Spearman rank-order

correlation and stepwise multiple regression were conducted to determine what variables correlated with and predicted the factors identified as measuring the paternal attitudes on becoming a father. Attitude scores were determined for each father in order to assess his ease or dis-ease in the transition to the paternal role. The high attitude scores of the fathers in this study seemed to indicate that by two weeks postpartum the fathers were experiencing ease in the transition to the paternal role. In spite of the adverse circumstances surrounding the birth of their premature infants, the fathers expressed feelings, beliefs, behavioral intentions, and actions which were positive and similar to those described in the literature regarding fathers of full term infants. There seems to be a tendency for men, regardless of the circumstances surrounding the birth of their infants, to think of the experience of becoming a father as rewarding.

The following five factors: self-image as a father; paternal relationships; paternal feelings of engrossment; parental role differentiation; and the preterm infant were identified by factor analysis as the factors which were actually being measured by the attitudinal scale. In this study, some of the identified antepartal, intrapartal, and postpartal events correlated with and were predictive of each of the five factors identified as underlying the paternal attitudes relevant to becoming a father of a premature infant.

The nursing implications put forward, based upon the study's findings, included the need to provide encouragement and support for paternal involvement in infant caretaking throughout the

childbearing and childrearing periods. Recommendations for further study included the use of larger random samples of fathers and the interview technique, the conduction of a longitudinal study, and further establishment of the validity and reliability of the study's instrument.

ACKNOWLEDGEMENTS

The completion of this research project was made possible by the support, guidance, and assistance of many people. My gratitude is extended to each member of my thesis committee. To Dr. June Kikuchi who, as my advisor and Chairperson of my committee, spent many hours not only providing guidance and critique of my work but listening and encouraging me in my efforts, I express a very sincere thankyou. To Dr. Rhonda Cockerill who gave invaluable expertise in the statistical analysis of the data, I express my appreciation. To Dr. Helen Simmons, I extend a special thankyou for having been available to give input, to discuss my study further, and to provide guidance.

I express my sincere appreciation to Dr. Clarke B. Hazlett who substantially offered guidance in the development of the measurement tools for this study. Moreover, I wish to acknowledge Janet Smith, Iris Campbell, and Dr. Peggy Ann Field for their interest and input in my study.

Special recognition goes to my classmates, Doris, Linda, Marilyn, Susan, Jane, and Kathy, who have shared educational endeavors with me for the past couple of years. Additionally, I am greatly indebted to the fathers who were willing to share with me this very special time in their lives.

Finally, I would like to extend thanks to my family and friends who have always been supportive of my efforts. To my husband Rick and daughter Vanessa whose encouragement, support, strength, and love were a necessity, my most loving thanks are given.

TABLE OF CONTENTS

Chapter		Page
I	INTRODUCTION	1
	Background of the Problem	2
	Statement of the Problem	4
	Purpose of the Study	5
	Research Questions	5
	Definition of Terms	6
	Assumptions	6
	Significance of the Study	6
	Summary	7
II	REVIEW OF THE LITERATURE	8
	The Transition to Fatherhood	8
	Relationships within the Childbearing and Childrearing Family	21
	The Experience of Becoming a Father of a Premature Infant	33
	The Conceptual Framework	40
	Summary	47
III	METHODOLOGY	48
	Variables	48
	The Independent Variable	48
	The Dependent Variable	48
	The Intervening Variables	48
	Research Instruments	49
	Research Questionnaire	49
	Demographic Data Sheet	51

TABLE OF CONTENTS (Continued)

Chapter		Page
III	METHODOLOGY	
	Reliability and Validity of the Research Questionnaire	51
	The Pilot Study	55
	Data Collection	56
	Setting	56
	Procedure	56
	Sample	57
	Data Analysis	59
	Summary	63
IV	FINDINGS	64
	The Intervening Variables	64
	Paternal Family Background	64
	Paternal Experiences During Antepartal, Intrapartal, and Postpartal Events	67
	The Infants' Condition	70
	Characteristics of the Spouses	76
	Paternal Attitudes on Becoming a Father of a Hospitalized Premature Infant	79
	Factor Analysis of the Itemized Scale	79
	Factor I: Self-image as a Father	80
	Factor II: Paternal Relationships	85
	Factor III: Paternal Feelings of Engrossment	85

TABLE OF CONTENTS (Continued)

Chapter		Page
IV	FINDINGS	
	Paternal Attitudes on Becoming a Father of a Hospitalized Premature Infant	
	Factor Analysis of the Itemized Scale	
	Factor IV: Parental Role Differentiation	85
	Factor V: The Preterm Infant	86
	Relationship of the Intervening Variables and the Factors Underlying Paternal Attitudes	86
	Factor I: Self-image as a Father	87
	Factor II: Paternal Relationships	87
	Factor III: Paternal Feelings of Engrossment	93
	Factor IV: Parental Role Differentiation	93
	Factor V: The Preterm Infant	94
	Predictors of the Five Factors Underlying Paternal Attitudes	94
	Factor I: Self-image as a Father	94
	Factor II: Paternal Relationships	100
	Factor III: Paternal Feelings of Engrossment	101
	Factor IV: Parental Role Differentiation	102
	Factor V: The Preterm Infant	102
	Summary	103
V	DISCUSSION	105
	Summary	117

TABLE OF CONTENTS (Continued)

Chapter		Page
VI	CONCLUSIONS, LIMITATIONS, AND NURSING IMPLICATIONS	118
	Conclusions	118
	Limitations	119
	Nursing Implications	121
	Summary	125
REFERENCES		126
APPENDIX I		133
APPENDIX II		143
APPENDIX III		145

LIST OF TABLES

Table		Page
I	Demographic Variables Related to the Fathers	60
II	Demographic Variables Related to the Infants	61
III	Intervening Variables Related to Paternal Antepartal Events	71
IV	Intervening Variables Related to Paternal Intrapartal Events	73
V	Intervening Variables Related to Paternal Postpartal Events	74
VI	Intervening Variables Related to the Infants' Neonatal Environment	77
VII	Intervening Variables Related to the Mothers	78
VIII	Results of Factor Analysis of Paternal Attitude Scores - Orthogonal Solution Varimax Rotation (36 Items)	81
IX	Spearman Correlation Coefficients for Intervening Variables and Factor I (Self-Image as a Father)	88
X	Spearman Correlation Coefficients for Intervening Variables and Factor II (Paternal Relationships)	89
XI	Spearman Correlation Coefficients for Intervening Variables and Factor III (Paternal Feelings of Engrossment)	90
XII	Spearman Correlation Coefficients for Intervening Variables and Factor IV (Parental Role Differentiation)	91
XIII	Spearman Correlation Coefficients for Intervening Variables and Factor V (The Preterm Infant)	92
XIV	Stepwise Multiple Regression: Paternal Attitude Factor Scores and Intervening Variables	95

CHAPTER I

INTRODUCTION

During the past few years, there has been a growing awareness of the importance of the father's role throughout the childbearing and childrearing periods. "The father is being identified as more than an economic provider; he is now considered to be an important factor in the development of his children" (Boyd, 1979, p. 1). Roehner (1976) points out three changes in western culture which have influenced the involvement of the father in the family unit: a recognition of the emotional importance of fatherhood, changes in family structures, and a shift in the definition of masculinity.

Today, many men are thinking about their roles as fathers and participating in childbearing related activities throughout pregnancy and birth, and in child caretaking (Marquat, 1976; Philips, 1978). However, conceptualization about parents and children during the childbearing and childrearing periods has focused almost exclusively on the mother-infant dyad. This emphasis seems to stem from an assumption concerning the primacy of the mother-infant relationship and a belief that paternal influences assume importance only in later infancy and early childhood (Parke, Power, Tinsley, & Hymel, 1979).

The literature which is available on fathers is replete with studies on different aspects of fathering and fatherhood during the early transition period to parenthood (Antle-May, 1975, 1978, 1981, 1983; Cronenwett & Newark, 1974; Fein, 1978; Leonard, 1976; Marquat, 1976; Roehner, 1976; Taubenheim, 1981). However, researchers

have primarily focused on fathers of full term healthy infants. There has been little research conducted concerning fathers of premature infants with respect to the acquisition of the paternal role.

Background of the Problem

As fathers are becoming recognized as important contributors to their infants' development, western society is urging fathers to assume a more active role in early infant care and development. Fathers are being encouraged to participate in prenatal classes, attend their wives' labor and delivery, and help with infant caretaking. The pressure toward greater paternal involvement in early child care is not restricted to fathers of full term infants. Fathers of premature infants are also being pressured to become more involved in the care of their hospitalized infants.

Fathers of premature infants have parental roles and experiences during the early postpartal period which seem to differ considerably from those of fathers of full term infants. The father's role may be more important when an infant is preterm as opposed to full term. The father may share the responsibility for the care and stimulation of the hospitalized premature infant with the mother. When the premature infant and mother are hospitalized, the father frequently has more contact with the infant and more responsibility for infant feeding during the early hospitalization of the infant than the mother (Parke, Power, Tinsley, & Hymel, 1980). Thus, he may begin forming a relationship with the child long before the mother.

In his study, Benfield (1976) found that fathers of premature infants experience drastic alterations in their activities.

Typical daily activities for these fathers included: visiting their babies, reporting their infants' condition to their convalescing wives, and working an eight hour day. The father may assume a central role in maintaining family stability after the infant's birth. Oriphory (1979) states that, during the premature infant's first few hours of life, the father has a recognized role as intermediary between the premature nursery and the mother. His task may be to support his wife emotionally and to help her to understand and accept the situation. Boyd and Mahon (1980) point out that an involved father is unlikely to become distant from his child and that the interest of the father in the infant and wife during the early stages of the baby's life will promote family cohesiveness.

Pederson (1980) argues that the father, as well as the mother, is a significant figure in the infant's social environment. However, the lack of a clearly defined paternal role, cultural conditioning, and a matricentric view of parenthood may inhibit the father's involvement with his infant throughout the childrearing period.

> The male today is understandably confused by the strong socialization messages that tell him that traditional authoritarian and provider duties are important to his family while he also obtains contradictory messages as to their negative contributions (Eversoll, 1979, p. 503).

An individual's attitudes regarding parental role acquisi-

tion are typically viewed as predispositions to actual parental role performance. Parke (1979) asserts that parental attitudes are "legitimate and important sources of data in their own right and are reports that provide information about ways in which parents perceive, organize and understand both their infants and their roles as parents" (p. 554). Pederson (1980) states that expressed attitudes are not substitutes for independent observations of behaviors but that self-reports tap both the person's cognitive constructions of his actions and those of another, and the goals, values, and expectations that a person holds for himself and another. Since there is a variation of response to the transition to fatherhood, one possible explanation for individual differences is individual attitudes and interpretations regarding the paternal role.

Statement of the Problem

Paternal attitudes expressed by fathers are predispositions to enact the father role in favorable or unfavorable ways. In consideration of the promotion toward greater paternal involvement, it is important to examine the attitudes expressed by fathers on becoming parents of hospitalized premature infants. An early assessment of paternal attitudes relevant to becoming a father of a hospitalized premature infant may indicate the needs of such fathers in terms of their transition to parenthood. Knowledge of these needs would facilitate the planning of effective nursing interventions with fathers who are adjusting to becoming parents of hospitalized premature infants. However, research concerning the event of becoming a parent of a premature infant has been conducted primarily on mothers and their preterm infants. Present

research and knowledge of attitudes expressed by fathers of premature infants are too meager to identify the common beliefs, feelings, behavioral intentions, and actions of these fathers during their transition to parenthood.

Purpose of the Study

The purpose of this study was to increase present knowledge and understanding of first-time fathers of hospitalized premature infants and early paternal role development.

Research Questions

1. What are the attitudes of first-time fathers, two weeks after their infants' birth, on becoming fathers of hospitalized premature infants?
2. What can be determined about the ease or dis-ease of fathers in their transition to parenthood from their expressed attitudes on becoming fathers of hospitalized premature infants?
3. Do the following selected variables: the fathers' family background, the fathers' knowledge and experience with infant/child care, the fathers' childbearing experiences, the infants' characteristics and environmental circumstances, the fathers' personal characteristics, the mothers' characteristics, and the fathers' actions vis-a-vis their hospitalized infants, which on the face of them appear to influence early paternal attitudes, do so? If so, to what degree and in what direction are these selected variables associated with early paternal attitudes?

Definition of Terms

The major terms of this investigation were defined as follows:

First-time father: a male whose premature infant is his first living child.

Premature infant: an infant whose gestational age falls between the end of the 30th week of gestation and the 36th week of gestation as determined by the Dubowitz scale, administered at the time of birth.

Attitudes on becoming a father: an individual's predisposition consisting of affective, cognitive, and conative elements which form and in turn are formed by the individual's feelings, beliefs, behavioral intentions, and actions regarding his father-infant relationship; his husband-wife relationship; his infant; and his life-style and self-image, as a man and a father.

Assumptions

1. After the birth of a premature infant, the family members are coping with a situational crisis which entails a potential resource strain.
2. Life experiences can play a part in the development of an attitude.
3. Fatherhood is a human developmental stage.

Significance of the Study

Nurses are in a unique position to promote the health of fathers during the antepartal, intrapartal, and postpartal periods. The neonatal intensive care nurse has an excellent opportunity to

provide primary mental health care to fathers of preterm infants and their families through facilitating the adjustment of such fathers to their fathering role and their infants' condition and the development of a strong emotional paternal-infant and maternal-infant relationship.

In order to facilitate the initial adjustment of fathers of premature infants to parenthood, nurses need to know and understand the needs of such fathers. Nursing interventions, not based on such knowledge and understanding, may be misdirected and thus ineffective or counterproductive. Information obtained from this study of paternal attitudes relevant to becoming a father of a hospitalized premature infant during the early postpartal period may enhance the nurse's knowledge and understanding of the needs of such fathers in adjusting to their paternal role during the early postpartal period.

Summary

A review of the literature indicates that little research has been done regarding fathers of premature infants and little is known about these fathers. However, the role of these fathers has been recognized as important throughout the childbearing and childrearing periods. Thus, this study of early paternal attitudes relevant to becoming a father of a hospitalized premature infant seemed to be warranted since knowledge and understanding of such attitudes are required by nurses in order to facilitate the adjustment of these fathers to their new paternal roles.

CHAPTER II

REVIEW OF THE LITERATURE

In this chapter, literature relative to the topic of attitudes of first-time fathers on becoming fathers of hospitalized premature infants, is discussed. The literature review is presented under the following headings: (a) the transition to fatherhood, (b) relationships within the childbearing and childrearing family, and (c) the experience of becoming a father of a premature infant.

The Transition to Fatherhood

Research in the area of transition to parenthood has been conducted from a variety of theoretical perspectives and has produced different findings depending on the theoretical framework used. The concept of "parenthood as a crisis" due to family reorganization and the immediate acquisition of new behavioral patterns has been extensively researched. Parenthood studies have indicated that varying degrees of crisis are associated with the transition to parenthood (Dyer, 1963; Hobbs, 1965; Le Masters, 1957; Russell, 1974). As in the case of any situation which may appear to be threatening on the surface, an event is only experienced as a crisis if the individual perceives it as such. The process of becoming a parent has also been viewed in terms of a developmental phase or task (Benedek, 1970; Briggs, 1979; Coleman & Coleman, 1972; Duvall, 1975; Tonti, 1979).

Rossi (1969) argues that it is misleading and restrictive to perpetuate the use of the term "normal crisis" for parenthood because these concepts are basically incongruent. "Normal" implies

natural successful resolution and "crisis" indicates the possibility of non-resolution. Rossi views parenthood as a developmental stage that most married people experience. Russell (1974) considers the period of transition to parenthood as a time when growth and gratification as well as stress and dysfunction may be experienced. However, regardless of the frameworks utilized, there appears to be agreement among the investigators that the event of becoming a parent can be stressful.

The transition to parenthood period is a major one in the life cycle of most individuals and families, but traditionally more significance has been placed on the psychological reactions of women than of men to becoming parents. Nash (1965) maintains that society's matricentric views have been supported by the matricentric literature available to parents as well as to professionals. However, "previously accepted models of womanhood, of manhood, of work, of family life, and of the relationship between work and family life are being scrutinized, examined, and remade" (Fein, 1978, p. 327). Recently, fathers have become subjects of investigations during the transition to parenthood period. This current interest in the father may be reflective of the fact that fathers, having become more aware of the changes in society's traditional sex role expectations, are blending work and family life, and trying to become more involved in child care.

Today, many fathers are beginning parenthood in ways different from their fathers' beginning fatherhood experiences. Eversoll (1979) conducted a cross-generational study of young adult males and their parents to measure their attitudes toward paternal

role performance. The results indicated that the sons, more than the parents, expected fathers to be more involved in nurturing and recreational activities. Although the results are encouraging, more research is required to determine if the attitudinal patterns of the young males are present when they actually become fathers. It should be kept in mind that the sample of young males studied consisted of college students who may tend to hold more liberal or non-traditional attitudes toward fathering.

Parenthood, as a developmental or maturational crisis, demands that both parents integrate new roles into their respective roles as individuals and spouses. Conflicts may arise when a man adds a new major life role, that of father, at a time when he already has other major role commitments, such as that of husband and worker (Cronenwett & Kunst-Wilson, 1981a). Role conflict may result from incompatibility among an individual's roles (Robischon & Scott, 1969). Burr (1972) states that role conflict may arise when there are no explicit definitions of the behaviors expected for a particular role.

The traditional paternal role accepted in western society has been limited to one of provision of economic support to the family and emotional support to the mother (Parsons & Bales, 1955; Phillips, 1978). Fathers who enact a non-traditional paternal role and perceive themselves as deeply involved in the care of their infants may be prone to role conflict since the expectations these fathers hold for their paternal role may not be congruent with those prescribed by societal norms. The premature birth of an infant may be a situation in which the actual paternal role performance is different from both that of the father's expectations and societal

norms. As a result, the paternal role transition may be difficult.

Becoming a father is not a single event but an ongoing process of becoming acquainted with the demands and joys of a new role. Kierman and Scoloveno (1979) state:

> Capacity for fatherhood is primarily biological, resting in the efficiency of reproductive functioning. The development of fatherliness is not static, but a gradual process which spans the life span of those individuals exposed to the potential to become a father and to the actuality of becoming one (p. 183).

Coleman and Coleman (1971) contend that impending paternity uncovers what it was like to have been fathered as a child. The memories of childhood combine with the expectations the father has of himself in the paternal role. A primary opportunity for learning about fathering occurs through the son's relationship with his own father or other fathering figures (Antle-May, 1975; Coleman & Coleman, 1971; Murphy, 1977). A man's attitudes toward fathering have been formed from the time of his own birth and include attitudes about how he was fathered and his male role identification (Leonard, 1976). Benedek (1970) identified the adaptational and developmental components of the process of becoming a father as including early parent, child, and sibling relationships; and the resolutions of early conflicts.

Briggs (1979) suggests that the transition to parenthood involves several stages, each accompanied by emotional upheaval and

pressure for readjustment, as well as an increased potential for growth. Rossi (1969) describes four phases of the transition to parenthood period: anticipatory, honeymoon, plateau, and termination. The first two phases concern initial adjustment to the parental role.

The anticipatory phase begins prior to pregnancy and ends with the birth of the baby. During the anticipatory phase, the father begins his social and psychological adjustment to the parental role. The first introduction to fatherhood comes with the confirmation of pregnancy. The father may react to this information with ambiguous feelings of what being a father means to him (Phillips, 1978). Pharis and Manowitz (1980) postulate that expectant fathers prepare for their future new role by building models or conglomerates of images, fantasies, attitudes, and the meaning of pregnancy and fatherhood in relation to their own lives. A person prepares psychologically for a new role by developing images of what he/she thinks will be expected of him/her (Thornton & Nardi, 1975).

Rossi (1969) defines the second phase of the transition to parenthood as the honeymoon phase or the post childbirth period during which, through intimate and prolonged contact, an attachment between the child and parent develops. In the postpartal period, the father begins to obtain tangible feedback about his role enactment. The literature indicates that the mother, infant, and others indirectly influence fathering behaviors (Parke, 1979; Pederson, 1980). Murphy (1980) states that, in the postpartal period, the parents begin to adjust to their role demands.

Impending fatherhood brings about changes in almost every

aspect of a man's life. The expectant father begins to acknowledge how the pregnancy affects him as a man, a father, and a husband (Coleman & Coleman, 1971). On becoming a father, a man's self-concept, his roles within the family, and his relationship with the outside environment may change (Fein, 1978; Jessner, 1976). Antle-May (1978) suggests that "pregnancy has a varying emotional and physical impact on men, and the changes which pregnancy elicits in a man are related to the beginning development of his identity as a father" (p. 8).

The emotional needs and reactions of expectant fathers have been studied quite extensively. It has been found that the reactions of men to fatherhood are diverse and that, although many fathers express feelings of joy, some react with fear, anger, ambivalence, or depression (Marquat, 1976; Orbzut, 1976; Phillips, 1978; Roehner, 1976). According to Fein (1978), paternal feelings are based upon a man's wish to become a father, his envy of female childbearing, and his identification with his own father. From data drawn from the literature and from professional contact with expectant couples, Antle-May (1975, 1978) found that the expectant fathers' emotions and conflicts could be described under the following four categories: (a) protective feelings toward the wife, (b) anxieties concerning the provider role, (c) fears regarding the vulnerability of the wife and child, and (d) heightened dependency and nurturant emotions. These findings concurred with those of other studies of the experiences of expectant fathers (Hott, 1980; Leidenberg, 1967; Orbzut, 1970).

Wapner (1976) conducted a study of 128 first-time expectant

parents to determine the attitudes, feelings, and behaviors of the husbands toward expectant fatherhood. A questionnaire was developed by the investigator from data gathered through interviews with expectant fathers, using open-ended questions. The tool consisted of 63 items which were categorized according to the relevance of the statements with regard to feelings and attitudes concerning the family, fatherhood, the pregnancy, and the marital relationship. Separate categories were developed for items related to behavioral involvement in pregnancy by the fathers. The questionnaire was given to the fathers during the seventh month of pregnancy. As a group, the fathers appeared to be supportive of their spouses. They were highly involved in the experience of becoming parents and thought that they were experiencing an important developmental change. Wapner pointed out, however, that this finding of a high paternal involvement may have been partly due to the selective nature of the sample. All of the fathers had attended Lamaze classes and, thus, might have been inclined to be more involved and concerned during the pregnancy. Nevertheless, Wapner proposed that expectant fathers need to be closely involved with their spouses and to identify with them throughout a pregnancy in order to develop a paternal tie to their infants.

Wapner's study (1976) also revealed a discrepancy between the intense positive feelings reported by the expectant fathers during the pregnancy and the amount of behavioral involvement that they demonstrated during the pregnancy. Wapner postulated that expectant fathers might have difficulty finding ways to translate

their feelings about the pregnancy into meaningful and gratifying activities. "The expectant father has few socially acceptable ways of expressing to others and to themselves that they are soon to become fathers" (p. 11). In addition, the father's behavioral involvement in the pregnancy might be related to the interaction of his feelings about the pregnancy and variables such as extraneous events, individual motives, intellectual ability, or alternate behaviors available. These factors, combined with a vague paternal role definition, may contribute to a father's ease or dis-ease in his transition to parenthood. During the third trimester, the pregnancy may take on a new importance for the father and he may feel more in tune with his wife (Coleman & Coleman, 1971). By the end of the pregnancy, the concrete reality of the child must have been incorporated into the spatial and temporal life span of the father for a successful transition to parenthood (Antle-May, 1982).

Antle-May (1982) examined the social-psychological experience of first-time expectant fathers and the progression of pregnancy from the fathers' perspective. Extensive interviews with 20 first-time fathers and their wives were held at various intervals during the pregnancy. Data were also collected during interviews with 80 additional expectant fathers. The information from all sources was analyzed for recurrent themes and emergent concepts. Three phases in the development of the fathers' involvement during pregnancy were identified among first-time fathers. The three phases were: (a) the announcement phase, the period from the first suspicion of pregnancy until a few weeks after its confirmation;

(b) the moratorium phase, a period characterized by the man's postponement of emotional investment and behavioral involvement in the pregnancy; and (c) the focusing phase, a period during which the man's feelings and behaviors toward the pregnancy change during the last trimester and the expectant father redefines for himself and others his future status of father. These phases mark shifts in the father's emotional and behavioral involvement in the first pregnancy and reflect the importance of the man's readiness for parenthood.

In 1976, in a study conducted to determine how fathers prepare for fathering, Orbzut provided evidence to support the hypothesis that fathers undergo a psychological preparation for fatherhood. Twenty first-time expectant fathers were interviewed during the last two months of pregnancy. Orbzut found that the fathers prepared for fatherhood by utilizing the following five operations, utilized by women in the attainment of the maternal role (Rubin, 1967a): mimic, role play, fantasy, introjection, projection, and grief work. The activities which helped the fathers to prepare for fathering included: providing for the infant, attending prenatal classes, reading about fathering, observing other fathers, babysitting, anticipating changes in life style, and dreaming about the baby. The view that fathering and mothering are complementary roles, each with unique dimensions, was supported by the fathers. The fathers cited nurturing (33%), teaching (31%), and providing (11%) as the most important aspects of fathering. However, a majority of the fathers expected to have responsibilities different

from those of their wives. These responsibilities dealt with the instrumental roles of providing for the family and socialization of the child. Orbzut pointed out that, although fathers are being encouraged to be more nurturant, the fact that they think that they have other responsibilities must be kept in mind. Unfortunately Orbzut's study was limited to a small sample of fathers and only conducted at one point in time. Thus, the findings must be accepted cautiously.

Many variables have been identified in the literature as affecting a father's adaptation to fatherhood. Tonti (1979) described the following crucial determinants of the coping ability of new fathers: (a) the husband-wife relationship, and the husband and wife's ability to adjust and negotiate changes with the introduction of a new family member; (b) the economic resources of the man and the variables which relate to those resources such as age, socioeconomic status, and education; (c) a good support system of family, friends, and work; (d) a commitment to the fathering role and an effort to prepare oneself and one's environment for the new role; and (e) a healthy baby and good maternal health.

Other factors which may influence a father's coping abilities were identified in a study conducted with 30 expectant couples (Fein, 1976a). Interviews were carried out 4 weeks before and 6 weeks after the birth of the infants to determine the parents' feelings and experiences toward parenthood. The results suggested that participative childbirth had a confirming effect on a man's definition of himself as a father. Fathers who attended the

deliveries spoke positively of the experience. The findings of this study gave support to the findings of Cronenwett and Newark (1974) who had documented that fathers with childbirth preparation and/or who had attended their infants' delivery rated their overall experiences during childbirth as highly positive. Coleman (1969) postulated that men who participate in their wives' childbirth are given a means for coping with the intense feelings associated with childbirth and that childbirth preparation leads to more active participation by fathers in labor and delivery, resulting, generally, in both parents experiencing a positive childbearing period.

Fein (1976a) found that prenatal negotiations between husbands and wives concerning the paternal role were important to postpartal adjustment. Husbands who were unable to develop a coherent role which was congruent with the values and expectations of their spouses reported having more difficulty adjusting postpartally than those who were able to do so.

Antle-May (1980) states that a relationship may exist between paternal role preparation during the latter part of a pregnancy and a man's subsequent effectiveness and satisfaction in his role during the birth and early parenting periods. A father's speed of progression through these periods may relate to later adjustment to fatherhood. "The paternal experiences and reactions begin prior to conception and continue through childbirth in periods involving the father's readiness for entrance into the process" (Osofsky & Osofsky, 1981, p. 32). However, behaviors alone, such as attendance at prenatal classes, or reading about pregnancy, birth,

and childcare, are not necessarily indicators of an expectant father's readiness for parenthood (Antle-May, 1982). Cronenwett and Kunst-Wilson (1981b) believe that paternal involvement with childbirth preparation classes does not necessarily add to the fathers' knowledge about their future relationships with their infants. Also, ambiguity surrounding male and female parental roles makes it difficult for fathers to gather meaningful information relating to their role.

Wente and Crockenberg (1976) examined the extent to which first-time fathers were affected by perceived changes in their marital relationships, attendance at Lamaze classes, and the age of their infants. Data were collected through questionnaires and semi-structured interviews during the first three months postpartum and again at four to seven months postpartum. This study indicated that, while preparation for labor and delivery was important, there was little evidence that this type of preparation affected the father's postpartal adjustment to the paternal role. The fathers who had attended the Lamaze classes did not report an easier postpartal adjustment than fathers who had not attended the Lamaze classes. However, many of the fathers who had not attended the Lamaze classes were reported as having been present during labor and delivery. Many of the fathers indicated a feeling of unpreparedness for what came after birth. Wente and Crockenberg thought that this feeling of unpreparedness was reflected in the significant positive correlation found between lack of knowledge of parenting and difficult adjustment to fatherhood. A change in the husband-wife relationship was found to be associated with paternal difficulty

with the transition to parenthood. It is suggested in the study that the fathers had greater difficulty in adjusting when their infants were four to six months old than when they were three months old. This difficulty was reflected in the area of the husband-wife relationship.

Parke et al. (1979) suggest that the nature of a husband and wife's interaction pattern can have an impact on the marital relationship at various points during pregnancy and delivery. Porter and Demeuth (1979) stress the importance of marital adjustment and the planning of a pregnancy for spouses' acceptance of a pregnancy. When spouses experience satisfaction with each other, a pregnancy is likely to be welcomed. Russell (1974) found that the fathers' perceived improvement in the marital relationship following their infants' birth was associated with an easier transition to fatherhood.

Russell (1974) conducted a study of 511 couples to determine the crisis and gratification responses of couples undergoing a transition to parenthood for the first time. Crisis was defined as the changes in self, spouse, or relationships with significant others which the parent considered to be bothersome. The degree of experienced crisis was found to be slight or moderate for the group and several variables were found to be significantly related to the ease of dealing with the first year of parenthood.

In her study, Russell (1974) found that the following factors were unrelated to the fathers' crisis responses to their infants: father's educational level, baby's sex and age, wife's past and present occupation, total income of the family, and father's

preparation for parenthood. Variables associated with a low number of paternal crisis responses to the infant included: a paternal wish for more children, a planned pregnancy, a high level of marital adjustment, a problem-free pregnancy and delivery, a quiet baby, high saliency of the paternal role, and advanced paternal age. Variables identified as positively related to paternal gratification responses to the infant included: advanced paternal education level, paternal occupational prestige, paternal preparation for parenthood by reading books on infant care and caring for young children, a paternal wish for more children, high saliency of the paternal role, and perceived positive change in the marriage. Gratification was defined as the events and experiences parents enjoyed regarding their newly acquired parental role.

The literature concerning fathers who are experiencing a low risk, uneventful pregnancy and childbirth indicates that men are becoming increasingly aware of their thoughts, feelings, and behaviors related to becoming fathers for the first time. Men appear to progress through a process during pregnancy during which they define for themselves what it means to be a father.

Relationships within the Childbearing and Childrearing Family

With the birth of a baby, changes in role identities, role behaviors, and communication patterns occur within a family. Changes in interactions brought about by the birth of a newborn infant affect a father's relationship with his infant and spouse. However, literature regarding the relationships which exist within the child-

bearing and childrearing family has focused primarily on the mother-infant relationship. An exception is the conceptualization by Parke and Sawin (1979) of the father-mother-infant family unit as a triadic system of reciprocal influences in which the father has an active part. Lamb and Lamb (1976) state that, far from being insignificant, fathers are salient people in the lives of their infants. The father's most important contribution to child development may not be based on his role as the sole masculine parent, but as an equally affectionate, sensitive, and involved second co-equal parent (Weinraub, 1976).

A series of studies were conducted by Parke and O'Leary (1975); Parke, O'Leary, and West (1972); and Parke and Sawin (1976) to describe how fathers interact with their infants during the first few months of life. The overall results of these studies indicated that the fathers were just as nurturant as the mothers with their infants; were interested in their newborns; and, given the opportunity, interacted with them and engaged in caretaking activities. They engaged in fewer caretaking activities than the mothers, but were capable and competent in their execution of them.

In the first study of the series, Parke, O'Leary, and West (1972) observed paternal-infant interaction within the context of the mother-father-infant triad. The following infant behaviors were observed over a ten-minute period between 6 and 48 hours postpartum: cry, vocalization, mouth movements, look at parent, and look around. Maternal and paternal behaviors observed at the same time included: look, smile, touch, kiss, explore, feed, hand over to mother, imitate,

and vocalize. The results indicated that the fathers were just as involved as the mothers with their infants and did not differ significantly with regard to the majority of the behaviors observed. The researchers pointed out that their finding of a high degree of paternal-infant interaction might have been due to the following factors: the observations were made in an unique setting and in the presence of the mother, and the majority of the fathers had attended prenatal classes, had been present at the labor of their wives and the delivery of their infants, were highly educated, and were of the middle-class.

Parke and O'Leary (1975) conducted a second study in order to control for the intervening variables of their first study. A sample of fathers from the low socio-economic class who had neither participated in prenatal classes nor had been present during the delivery of their infants was observed alone with their infants and in the presence of their wives. As in the previous study, the fathers demonstrated a degree of involvement with their infants similar to that of their wives. Statistical analysis revealed, however, that the father in both studies was more likely than the mother to hold and visually attend to the infant and to provide physical and auditory stimulation. In both studies, smiling was the only single nurturant behavior in which the mother surpassed the father. The second study demonstrated that the fathers were as active as their spouses in their interactions with their infants alone or in the presence of their spouses.

Father-infant interaction during a feeding situation was

observed in a third study (Parke & Sawin, 1976). In a more structured context, that of feeding, it became evident that mothers spend more of their time engaged in feeding the infants and in related caretaking activities than do fathers. Similar findings have been reported in other studies which have explored fathers' involvement in infant/child care activities (Boyd, 1980; Leonard, 1977; Manion, 1977). As tasks such as bathing and feeding solids to their babies became more complicated and complex, it was found that fewer fathers participated in them.

A longitudinal study of parent-infant interaction over the first three postpartal months was conducted by Parke and Sawin (1979) to test the assumption that a father's involvement with his infant becomes more evident as the child becomes older. The researchers studied the impact of parental perceptions, attitudes, and knowledge on the paternal-infant interactive process. The sample consisted of two groups of fathers: 20 fathers of girls and 20 fathers of boys. Each group consisted of 10 firstborn infants and 10 later-born infants. The infants were full-term and healthy. Both parents were observed as they interacted with their infants on three different occasions: the early postpartal period in the hospital, three weeks post-hospital discharge in the home, and three months postpartum. A 45-item questionnaire developed by the researchers was completed separately by both parents on each occasion. The questionnaire was designed to assess the parents' attitudes toward their infants, their knowledge of infant development, and their perceptions of their parental role.

The findings of the above-mentioned study suggest that mothers and fathers play both similar and distinctive roles in early infancy. In terms of the types of behaviors the mothers and fathers directed toward their infants and their sensitivity to infants' cues, Parke and Sawin (1979) found that the responses of both parents were similar. However, differences were noted in the early postpartal period when the mothers were more engaged in routine caretaking tasks and the fathers were more involved in the social stimulation of their infants. This parental role differentiation was still evident at three months. Infant gender was found to be a strong contributor to these mother-father differences. The fathers tended to be more highly involved with their sons, while the mothers demonstrated the complementary pattern with heightened involvement with their daughters.

The findings of the study also indicated that parents' attitudes about infants paralleled the parents' behavior in interaction with their infants. Parke and Sawin (1979) concluded that parents' attitudes, including feelings about the baby, attributions about infant competence, and knowledge about infant caretaking, may mediate the behavior observed in parent-infant interactions. However, it was not clear from the study report whether or not the parents' attitudes changed over the first three months of their infants' life.

Other researchers have reported findings similar to those of Parke and Sawin. In a study of paternal attitudes toward parenting, Boyd (1980) found that the attitudes of first-time fathers elicited in the postpartal period correlated positively with actual

paternal participation in infant caretaking activities. Bigner (1977) demonstrated similar findings in a study of fathers of pre-school children, where paternal attitudes toward caretaking activities were found to correlate positively with actual father-infant involvement. Although these results are enlightening, an underlying misleading assumption is present in these attitude-behavioral studies. The research cited appears to purport that a particular paternal attitude toward aspects of fatherhood may lead directly to actual paternal role behaviors. Although an attitude may influence behavior, external variables such as ability, skill level, motivation, or extraneous events may interact with an attitude in determining behavior (Fishbein, 1975). More research is required in the area of paternal-infant interaction in order to clarify the linkage between attitudes toward aspects of fatherhood and subsequent or complementary parenting behaviors.

With regard to the subject of paternal-infant attachment, little evidence exists in the literature to support the notion that fathers are biologically constrained from developing strong attachment bonds to their infants (Cronenwett & Kunst-Wilson, 1981b; Earls, 1976; Gay, 1979; Parke & Sawin, 1976). It is thought that early interaction between a father and his infant aids in the development of paternal-infant attachment (Greenberg & Morris, 1974; Klaus & Kennell, 1976; Parke et al., 1979). In studies of paternal-infant attachment, the responses of fathers to their infants have been found to be similar to those of mothers to their infants (Gay, 1979; McDonald, 1978; Rodholm & Larrson, 1979; Taubenheim, 1981).

Greenberg and Morris (1974) utilized the term "engrossment" to describe the attachment behaviors of two groups of fathers whom they studied. One group of 15 first-time fathers had had initial contact with their infants in the delivery room. A second group of 15 first-time fathers had first seen their infants in the nursery, after the delivery of their infants. Questionnaires regarding the fathers' experiences were completed by all 30 fathers between 40 to 72 hours after the delivery of their infants. Interviews were conducted with half of the fathers from each group. From their research data, the researchers determined that the characteristics of paternal engrossment included: (a) tactile awareness of the infant as manifested by a desire to touch or to hold the infant, (b) visual awareness of the infant as attractive or beautiful, (c) a sense of perfection in the newborn, (d) an awareness of the infant's individual characteristics, (e) a strong attraction to the newborn which prompts the father to focus his attention on the infant, (f) a feeling of elation after the infant's birth, and (g) an increased sense of self-esteem and self-worth on seeing the infant for the first time.

Paternal attachment is thought, by some authors, to be a process that begins after birth and develops in the postpartal and infancy periods (Greenberg & Morris, 1974; Klaus & Kennell, 1976, 1981). However, Cranley (1983) believes that the attachment process begins during pregnancy, as a result of psychological and physiological events, and that expectant fathers demonstrate attachment behaviors toward their unborn infants. Tulman (1981) stated that the parents' experiences during pregnancy, the parents' perception

of their infant, and the nature of the parent-infant interaction following delivery influence parental attachment to the infant.

Peterson (1979) investigated the effects of selected birth-related variables on the paternal-infant relationship. Paternal experiences surrounding the birth of the infant and paternal behavior toward the spouses and infants during the delivery of the infants were found to be more determinant of paternal-infant involvement than paternal prenatal attitudes toward parenthood. Peterson concluded that the birth experience itself may act as a catalyst for paternal nurturant behavior.

Cronenwett and Newark (1974) suggested that a father's perceptions of his experiences surrounding his child's birth may influence paternal-infant interaction. Parke (1981) stated that a caesarian section delivery, regardless of whether or not the father is present in the delivery room, affects the way the father and infant relate to one another. Leonard (1976) pointed out that husbands of women who deliver by caesarian section may be influenced in their feelings toward their infants by the idea that the delivery was abnormal or of a crisis nature. Leonard suggested, however, that the relief experienced by fathers, following a caesarian section delivery, may explain the positive feelings expressed by some fathers toward their infants.

Toney (1983) examined the influence, on paternal bonding behaviors, of early holding of the infant at the time of the infant's delivery. No significant differences were found between fathers who had had contact for ten minutes with their infants during the first

hour after the infants' delivery and those who had not had this contact. However, a positive relationship was noted between the variables of education and male gender, and bonding behaviors. The findings of this study suggested that there might be a combined effect of the variable of early contact with other demographic and situational variables. In summarizing her findings, Toney stated, "The importance placed on a specific limited time period for optimal bonding for all parents may be inflexible neglecting each individual's ability for adaptation and the effects of variables surrounding new parents" (p. 19).

Gibbs and Corrington (1976) examined the relationship between role perception, delivery attendance, early contact, and childbirth preparation and paternal bonding. Data were obtained, using a questionnaire, from 60 first-time fathers, within 24 to 48 hours after the vaginal birth of their normal infants. The researchers identified role perception as the main influencing factor on paternal bonding, followed by attendance at delivery, and early contact. The researchers concluded that the father's role perception and adaptation to his infant may be a stable phenomenon, not easily affected by early contact with the infant.

Fein (1976b) pointed out that there is considerable variation in fathers' involvement with their infants, and a direct relationship between a man's participation in the labor and delivery experience or prenatal classes and later fathering acts is unlikely. Some authors have suggested that wives' pre-birth expectations of their husbands' involvement with their infants' caretaking may in-

fluence paternal-infant interaction (Cronenwett & Kunst-Wilson, 1981b; Fein, 1976b). In an initial study, Fein (1974) found that, prior to delivery, men who had had more experience caring for children expected to be more involved in infant care than men who had not had previous experience with young children. A follow-up study (Fein, 1976b) indicated that the men who had expected to be more involved with their infants' caretaking were indeed more involved.

The amount of parental-infant caretaking which takes place soon after the birth of the infant has been found to be associated with the formation of parental-infant attachment (Ainsworth, 1968). In addition, some researchers have found that fathers who had been present at their infants' birth demonstrated greater paternal-infant caregiving involvement and more bonding behaviors than fathers who had not been present at their infants' birth (Pederson, 1980; Toney, 1983).

Intervention programs, consisting of opportunities to carry out paternal caretaking activities during the postpartal period, seem to enhance paternal-infant attachment. In a study, Bills (1980) demonstrated the effect of early paternal-infant contact, through caretaking tasks, on paternal-infant affectionate bond formation. The results, although inconclusive, indicated that early paternal-infant contact might benefit the paternal-infant attachment process. Taubenheim (1981) also found that fathers who engaged in caretaking activities, such as feeding, during the neonatal period, showed a higher number of attachment behaviors toward their infants. Bills (1980) stated that a period of acquaintance

has to occur before an affectionate paternal-infant bond can develop. Unfortunately, there is a dearth of literature on the development of paternal-infant attachment and on how the acquaintance period may be affected by the premature birth of an infant.

In recent years, researchers have begun to document the degree to which the infant's characteristics affect the caregiver. Sex, temperament, activity, and developmental status of the infant have been shown to affect paternal-infant interaction and attachment (Bigner, 1977; Boyd, 1980; Jones, 1981; Retind & Dickenschield, 1976). The findings of some studies suggest that the releasing factors for paternal interaction and attachment may be more external than internal, thus requiring normal aspects of active infant behaviors (Greenberg & Morris, 1974, p. 527).

Leonard (1976) purported that a father's attitude toward his infant's characteristics can have a profound effect on their developing relationship. She conducted a study to explore fathers' feelings and attitudes toward their newborn infants and to identify what factors facilitated the development of positive paternal feelings and attitudes. A questionnaire measuring paternal feelings and attitudes toward the newborn was given to 52 first-time fathers to complete on the second day postpartum. In addition, questions concerning demographic and psychosocial variables which might influence paternal feelings toward an infant were included. The fathers' responses to the questionnaire indicated that the men felt very positively toward their infants. Analysis of the variables indicated that the higher attitude scores were associated with joy

in being around and taking care of young children, past experience with young children, a planned pregnancy, a desire for children, and a high self-rating on knowledge of baby care.

Pederson (1979) assessed the influence of the husband-wife relationship on parental-infant interaction. He found that the husband-wife relationship affected the mother-infant and father-infant units. The amount of tension and conflict in the husband-wife subsystem was associated negatively with father-infant interaction as well as maternal caretaking. When the father was supportive of the mother and evaluated her maternal skills positively, the mother was more likely to be effective in caretaking. The same may hold true for fathers. Research on fathers who experienced the "blues" postpartally has highlighted the importance, to fathers, of their marital relationship (Pederson, 1979; Russell, 1974). It seems that, in addition to the assumption that a loving husband/father facilitates development of the maternal-infant relationship, an assumption could be made that a loving wife/mother facilitates development of the paternal-infant relationship. The paternal-infant relationship can be understood only when the total set of relationships among all members of the family have been assessed (Parke, 1979).

Parke et al. (1979) pointed out the need to examine the influence of the birth of a high-risk infant on the cohesiveness of the family. Characteristics of such an infant have been shown to impinge on a marital relationship. There appears to be less tension and conflict in a marriage when an infant is motorically mature than when an infant is motorically immature. Leiderman and Seashore (1975)

found, in families with a childbirth complication, a disproportionate amount of stress in the marital relationship. It is possible that such parents may experience difficulties in their adjustment to parenthood. Leiderman and Seashore also reported that divorces were more prevalent in families which had experienced a premature birth than in families with full term infants.

The studies cited have focused on the development of the paternal-infant relationship and the husband-wife relationship within the childbearing and childrearing family. It appears that the involvement of fathers with their infants can be fully understood only in the context of their relationships with other family members. However, the generalizability of the findings of the studies cited to all fathers, especially fathers of premature infants, is limited since the subjects of these studies were fathers of healthy full-term infants.

The Experience of Becoming a Father of a Premature Infant

A delivery before the end of the third trimester occurs at a time when the father is focusing on his own experiences with the pregnancy and determining what being a father means to him. The father may not be psychologically ready for the birth of his infant and the sudden reality of parenthood (Kennell, 1978). The lack of role preparation or "anticipatory socialization" may adversely affect the fathers in their transition to the paternal role (Burr, 1972).

With the birth of a premature infant, harsh realities replace the parents' hopes for a full term delivery and infant. The

parents are often separated from their infants upon transfer of their infants to a neonatal intensive care nursery. Parents separated from their infants may be unable to complete, with the child, the identification process described by Rubin (1967a). Furthermore, the delayed contact between the parent and infant may affect the parent's later behavior toward the infant (Opihory, 1979). The parents may develop distorted perceptions of their infants and their role as parents (Murphy, 1977). Throughout the hospitalization period, the parents often become secondary caretakers to the highly competent nursing and medical staff. In addition, the atmosphere of the intensive care nursery is tense and, thus, not very conducive to parental role development. Minde (1981) stated that the uncertainty regarding not knowing what is in store and the frequent perception that premature infants are completely different from normal full-term infants affect the parents' conceptualization of their caretaking role.

Parents of premature infants face not only a developmental crisis on becoming parents, but also a situational crisis, as they have become parents of a baby who requires intensive care. Caplan (1960) described three dimensions of parental response to the crisis of the birth of a premature infant: (a) the parents' cognitive grasp of the situation; (b) the parents' handling of their feelings toward the situation; and (c) the parents' seeking and obtaining support from others to help with tasks and deal with feelings. The pattern of parental responses toward the premature delivery may be indicative of ease or dis-ease in the transition to fatherhood.

The experience of a preterm birth invariably elicits a

certain amount of grief, anxiety, and distress in parents (Benfield, 1976; Kaplan & Mason, 1965; Klaus & Kennell, 1976, 1981; Minde, 1981). Minde (1980) stated that the crisis created in the parents' lives by the birth of a premature infant has some basic features; yet the manifestations of such a crisis and the aspects of it which trouble and perplex parents vary greatly from parent to parent.

Fathers will respond and adapt to the crisis of a preterm birth in their own unique way. Unfortunately, fathers of premature infants are frequently mentioned in the literature only in terms of the support they give to their wives rather than their reactions to the premature delivery and infant. Fathers of premature infants may be overwhelmed with concern for their babies' future, their spouses, their role as father, and the unknown future (Minde, 1980).

Kaplan and Mason (1965) described four psychological tasks which are essential to complete successful maternal role enactment when an infant is born prematurely. Fathers may also have to accomplish these tasks in their transition to fatherhood, following their premature infants' birth. These tasks include: (a) withdrawal from the relationship already established with the fantasized unborn child; (b) facing and acknowledging the failure to produce a normal child; (c) resuming the process of relating to the baby, which was previously interrupted; and (d) realizing and understanding how the premature infant differs from the full-term infant.

Benfield (1976) conducted a study to examine the attitudes, feelings, and behaviors of parents whose critically ill infants were transferred to an intensive care nursery in another hospital. The

sample consisted of 101 mother-father-infant groups. A questionnaire was designed to obtain information about parental attitudes, feelings, and behaviors experienced during pregnancy, labor and delivery, and the postpartal period. Seven items were included to measure anticipatory parental grief expressed following the transfer of the baby to another hospital. In addition, six questions were included to measure parental grief responses in the following areas: episodes of crying, praying for the baby, depression, disbelief, thinking the baby might die, and wanting to be left alone. The anticipatory grief score suggested that, after the transfer of the infant to a distant hospital, the parents reacted in a manner which was similar to that of parents whose babies had died in the neonatal period.

Benfield (1976) reported differences between mothers and fathers in relation to parental grief responses and anticipatory grief scores. Significantly more mothers than fathers admitted to loss of appetite and feelings of sadness, anger, and guilt. The findings suggested that more mothers than fathers experienced disbelief, prayed for the baby, were depressed, and cried. The maternal grief scores exceeded those of the fathers in 61 instances. The fathers' grief scores were found to be positively related to delivery by caesarian section. Benfield concluded that the differences in maternal and paternal responses might be attributed to male-female differences in willingness to express feelings rather than to differences in actual grief experienced. A major limitation of the study was the likelihood of an underestimation of the actual grief experienced. Another limitation was that the questionnaire was completed by parents on the day of the baby's discharge from the

hospital to which the baby had been transferred and not at the time of actual transfer of the baby to that hospital. Also, the author did not clearly describe his findings with regard to paternal and maternal attitudes. The author suggests using the questionnaire to determine the needs of families of premature infants. However, it is unclear to what needs the author was referring and how the study findings relate to those needs.

Minde (1980) investigated the interactive patterns of parents with their premature infants during the first six months of their infants' life. Twelve infants and their parents were observed by two people; one watched the parents and the other watched the infants. The observations commenced while the parents, either singly or together, visited their infant in the hospital nursery. The length of the observations varied according to the length of the parents' visits. The following infant behaviors were observed and coded: eyes open; cry; grimace; vocalize; smile; arm, leg, or head movement; and hand-to-mouth. Parental behaviors observed and coded included: look; look en face; touch; instrumental touch; hold; vocalize to the infant; vocalize to each other; and standing greater than three feet from the infant. Follow-up visits were made to each family three months after the infants' hospital discharge. Each parent was observed in a five-minute play period with his/her infant. The parents submitted a log of the infant's caretaking routine that they had kept for a week as requested.

Although the results of the above mentioned study are based on observations of a small, selected group, they support the findings

of previous research in the area of early parental role development. The mothers and fathers demonstrated similar social interaction patterns with their infants during the hospitalization period. This similarity in interaction patterns was attributed by Minde to the greater extent to which fathers of hospitalized premature infants, as compared to fathers of full term infants, enact their role during the early hospitalization period of their premature infants.

The similarity in maternal-infant and paternal-infant interaction observed by Minde (1980) during the infants' hospitalization was also observed by him during a play situation at three months post hospital discharge. The sole difference was that the mothers were more likely to incorporate some caretaking into the play situation. Also, considerable differences were found in the parents' reports of their daily activities with their infants. In the way parents of full-term infants have been observed to behave, the mothers remained the primary caretaker while the fathers engaged in little caretaking. Unfortunately, in the study, no attempt was made to elicit the fathers' feelings, concerns, or beliefs about becoming a father over the six month follow-up period. Thus, it is unknown what predispositions, present in the fathers, might have influenced the paternal behavior which was observed.

Minde (1980) suggested that premature infants, like their full term peers, significantly influence their caretakers. The unusual behaviors of premature infants may influence paternal attitudes and behaviors toward the infants. The premature infant behaves differently, both physically and neurologically, as compared to the

full-term infant (Brazelton, 1979). Premature infants, during the hospitalization period, are usually ill, sleepy, and unresponsive. They often demonstrate disorganized behavioral responses to stimuli (Parke et al., 1981). Fathers may find this type of behavior difficult to deal with as reflected in their tendency not to interact with non-active or highly sedated babies (Parke, 1972). Jones (1981) reported that paternal interactions appear to increase with an alert active infant.

Benedek (1967) referred to the infant as the total object of the father's secondary narcissism. It is thought that the father of a premature infant is likely to suffer a loss of self-esteem and self-worth (Greenberg & Morris, 1974). However, paternal self-perception and feelings of esteem after the birth of a premature infant have not been investigated. It can be hypothesized that, if positive feelings and increased self-worth are present in fathers of preterm infants, these attributes might positively affect aspects of assumption and enactment of the parental role.

In conclusion, the literature to date points out that the birth of a premature infant is experienced as a crisis by the father. Such a birth may affect the fathers' ease or dis-ease in his transition to fatherhood. The literature indicates that a person's attitude toward becoming a parent may be a predisposition to respond in a certain way to the parental role and subsequent parenting activities. A premature birth may influence both mothers' and fathers' attitudes toward parenthood. It is evident from the literature that more research is needed in the area of fathers and

hospitalized premature infants in terms of early paternal adaptation to fatherhood.

The Conceptual Framework

The conceptual framework for this study of the attitudes of first time fathers toward becoming parents of hospitalized premature infants includes concepts from role theory and attitude theory. These concepts will be described as they pertain to the study.

Societies are organized around positions which are occupied by persons who perform specialized activities or roles. "Position is a conceptual social unit, the achieved or ascribed social status resulting from the performed or anticipated activities of persons enacting specified roles, a cognitive organization of rights and obligations in a socially defined interaction situation" (Mercer, 1967, p. 237). Robinschon and Scott (1969) defined a role as the pattern of goals, beliefs, feelings, attitudes, values, and actions which members of a society expect should characterize the occupant of a social position. Within a family unit, individuals, such as women, can occupy multiple positions: wife, mother, and daughter. The roles within these positions are learned in the process of socialization.

Roles are not static but change as circumstances and events precipitate a change. Role transition, a concept of role theory has been defined as, "the addition or termination of a role without any changes in other roles, or the termination of one or more roles and the concomitant beginning of another" (Burr, 1979, p.

402). In an individual's life span, parenthood is a phase from which new social roles develop out of interaction with others in the social network. In becoming parents, each partner gradually adds new facets to his/her identify. Both the husband and wife integrate new roles in their respective repetoire as individuals and as spouses.

A basic concept in role theory is the complimentarity of roles. A person's role does not exist in isolation, but is reciprocal to the roles of other people in the social milieu (Johnson, 1979). The taking on of the paternal role necessitates role transitions for the father with regard to his new child, his spouse, his peers, and the outside world. The birth of an infant may be associated with a considerable realignment of roles and may change the direct and immediate reciprocity between husband and wife (Benedek, 1969). In his/her new role, a parent incorporates new attitudes, beliefs, and responsibilities in order to achieve reciprocity with his/her role partners: the infant and the spouse (Rubin, 1967a).

The paternal role is learned through a complex social and cognitive process. Societal norms, demands, and rules may dictate the manner in which the occupant of a social position should behave, the particular attitudes and values appropriate for him to hold, and the knowledge and skills he should possess (Thornton & Nardi, 1975). A father learns about his role from identifying with others enacting the paternal role and from his wife and infant who are enacting reciprocal roles.

Role attainment evolves over four stages: anticipatory, formal, informal, and personal (Thornton & Nardi, 1975). A role is

not fully attained until the person has anticipated it, identified the role of relevant others, identified the expectations of the new role, formulated his own expectations of the role, reacted and reconciled these various expectations, and accepted the final outcome (Johnson, 1979; Thornton & Nardi, 1975).

The anticipatory phase of paternal role attainment is the period prior to incumbency during which a person commences social and psychological adjustment to the new role by learning the expectations of the role (Johnson, 1979). The foundation of the first stage may be established as the child observes parenting behaviors in his family context. The prenatal period itself can be considered part of the anticipatory stage (Mercer, 1981). This stage is characterized by role playing, idealizing, fantasizing, and identifying with the unborn child and the altered life style.

The formal stage begins when the person is in the particular social position. Parental role enactment is largely determined during the formal stage by the consensual expectations of the members of the role sets, that is, the infant, the spouse, the peers, others, and the incumbent himself (Thornton & Nardi, 1975).

During the informal phase, the person places greater emphasis on his own personal role expectations. The individual has the opportunity to begin shaping the role to fit his past experiences and future goals, and thus, to formulate an individual style of role enactment (Thornton & Nardi, 1975).

The final or personal stage is characterized by the incorporation of the role into the self and a sense of harmony,

confidence, and competence in performing the role. In the final stage, the person imposes his own attitudes, values, knowledge, and skills in his role enactment.

Although individuals learn a new role in similar ways, a wide latitude for role acquisition and role enactment exists. These differences may be related to the various ways people respond in interpersonal situations, their knowledge of the role, their motivation to perform the role, their attitudes toward the role behaviors and themselves in the role, and the behaviors of other people in the situation (Robinschon & Scott, 1969). Mercer (1981) states that there is a "core self", acquired through socialization, that is relatively stable in shaping and constraining the way one defines a role.

Pharis and Manowitz (1975) state that parents, through the influence of their attitudes, prejudices, and personality characteristics, adjust to their assigned roles in ways unique to them. Pederson (1980) points out that role enactment is a function of attitudes towards the behaviors involved in carrying out the role, the beliefs about norms associated with the role, and the motivation to comply with these norms. He further purports that, in addition to an assessment of a person's role enactment, personal verbal reports about the role transition may tap a person's cognitive and emotional construction of the situation and role. Parke (1979) states that parental attitudes are sources of information about ways in which parents perceive, organize, and understand both their babies and their parental roles.

Attitudes have been conceptualized as predispositions based on a person's salient beliefs about a phenomenon and the person's evaluation of the phenomenon's attributes. An attitude should be considered as a concept which is conceptually distinct from, but related to, such concepts as a belief, a behavioral intention, and an overt behavior (Fishbein & Azern, 1975).

The primary building blocks of an attitude are a person's beliefs about an object, an event, an action, or a person. A belief may be descriptive, evaluative, or exhoratory in nature (Rokeach, 1968). Rokeach (1968) considers that all beliefs are predispositions to actions and an attitude is a set of interrelated predispositions to actions organized around an object or situation. An attitude has cognitive, affective, and conative properties since the several beliefs comprising an attitude have these properties. Also, these properties interact and reinforce one another.

Throughout a life time, a person forms different beliefs about various phenomena. By direct observation, by information received from outside sources, or by various inference processes, a person learns and forms a number of beliefs about a phenomenon (Fishbein & Azern, 1975). People hold both positive and negative beliefs about an object, event, action, or person. An attitude corresponds, in part, to the total number of beliefs associated with a phenomenon. Thus, one belief in isolation may be an unreliable indicator of an attitude.

Values are types of beliefs that underlie attitudes (Rokeach, 1968). "A value is internalized, consciously or uncon-

sciously, and is a criterion for guiding action, for developing and maintaining attitudes toward objects and events, for justifying one's own and others' actions and attitudes, for morally judging self and others, and for comparing self and others" (Rokeach, 1968, p. 197). Attributes of a phenomenon that are viewed as important are valued as more positive or negative than attributes that are viewed as unimportant (Fishbein & Azern, 1975). Thus people holding the same beliefs may have different attitudes and people holding different beliefs may have the same attitude.

Attitudes are learned and, thus, are susceptible to change. Introducing new salient beliefs or changing a person's evaluation of a phenomenon's attributes can alter attitudes (Fishbein & Azern, 1975). Since early childhood, beliefs regarding the paternal role may have been formed and changed or reinforced through socialization. As parental inputs, infant inputs, and the interaction of the inputs alter behaviors in the parent-infant relationships, parental beliefs regarding becoming a parent may change. Kelman stated (in Rokeach, 1968, p. 135), "attitudes expressed by an individual may vary from situation to situation, depending on the requirements of the situation in which the person finds himself and the motivations which he brings into the situation." A father of a high risk premature baby may be exposed to new information with regard to becoming a father. As a result, the father's beliefs about the paternal role, the newborn infant, himself as a father, and his spouse may change.

An attitude is considered to guide or influence one's behavior. The viewing of attitudes as general predispositions

discounts the idea that attitudes have a simple one-to-one relationship to actions (Fishbein & Azern, 1975; Zimbardo, 1977). Fishbein (1975) delineated a model of the relationship of attitudes to behaviors in which behavioral intentions serve as the connection between attitudes and behaviors. In addition to attitudes, behavior is determined by personal and social norms and by the motivation to comply with these norms (Fishbein & Azern, 1975). As attitudes indicate only a disposition toward certain actions, actual overt responses are influenced by contextual circumstances (Summer, 1970). External forces and extraneous considerations can cause people to behave habitually inconsistently with their attitudes. Intentions are not assumed to determine attitudes; however, it is possible to view attitudes as determinants of the overall feasibility of a person's intentions.

The above mentioned concepts from role theory and attitude theory may be utilized to understand the transition period to fatherhood. A man enacts the paternal role with a more or less articulated sense of identify and a set of beliefs about aspects of the role. The totality of beliefs held by the father about himself as a parent, himself in his other roles, his changed life style, his new child, his spouse, and his relationship with his new child may help make up his overall attitude toward becoming a father. The social environment may have an impact on the role transition as it could affect the norms held or perceived by the father and his motivation to comply with them (Walker, 1980).

Summary

The literature review indicates that fathers are increasing their involvement throughout pregnancy and in child caretaking. Numerous variables have been identified as being associated with the early transition period to fatherhood. However, studies have been conducted largely with fathers of healthy full term infants. Few studies have been carried out which focus on fathers of premature infants during the early transition to fatherhood. It seems that concepts from role theory and attitude theory may be helpful in gaining an understanding of the early transition to fatherhood period.

CHAPTER III

METHODOLOGY

An exploratory descriptive study was conducted to investigate the attitudes of first-time fathers to becoming parents of hospitalized premature infants. Data were collected between March, 1983 and June, 1983 in two large, urban, general hospitals through the administration of a questionnaire to first-time fathers of hospitalized premature infants and an examination of the infants' hospital records.

Variables

The Independent Variable

The independent variable was the impact of a premature infant's birth as experienced by a first-time father during his early transition to the paternal role.

The Dependent Variable

The variable of attitudes relevant to becoming a father, expressed by first-time fathers approximately two weeks after their infant's birth, was the dependent variable.

The Intervening Variables

The intervening variables, the major demographic and psychosocial variables, identified by researchers as possibly associated with paternal attitudes relevant to becoming a father of a premature infant included: 1) the father's family background, 2) the father's child caretaking experiences, 3) the father's

childbearing experiences with the infant, 4) the father's interactive behaviors with his hospitalized infant, 5) the premature infant's characteristics and environmental circumstances, 6) the father's demographic characteristics, and 7) the mother's characteristics in terms of employment status, antepartal history, and type of delivery.

Research Instruments

Instruments developed to measure paternal needs during the prenatal period (Marquat, 1976); paternal attitudes and feelings toward the newborn, the paternal role, and pregnancy (Bills, 1980; Boyd, 1980; Leonard, 1976; Wapner, 1976); and paternal-infant interaction and attachment behaviors (Cranley, 1981; Jones, 1980) were examined for possible use in the study. However, the instruments had been designed for and administered to fathers of full term infants or fathers of older infants who were at home and did not seem to be appropriate for use, as they existed, with fathers of hospitalized premature infants.

Research Questionnaire

A questionnaire was developed to measure paternal attitudes on becoming a father of a hospitalized premature infant by utilizing portions of the following questionnaires reported in the literature: 1) Attitudes Toward the Newborn (Leonard, 1976); 2) Affection Relationship Questionnaire (Bills, 1980); and 3) Attitudes Toward Fathering (Boyd, 1980). Also, items were added, deleted, or modified so that, on the face of it, the tool was relevant and repre-

sentative of the experiences encountered by first-time fathers when they become parents of hospitalized premature infants.

The questionnaire consisted of two parts (see Appendix I). The first part contained questions regarding demographic and psychosocial variables assumed to be related to attitudes toward becoming a father of a hospitalized premature infant. The second part of the questionnaire focused on attitudes toward becoming a father of a hospitalized premature infant. The items included in the second part were assumed to reflect the father's beliefs, feelings, behavioral intentions, and actions pertaining to the following components: 1) the father-infant relationship; 2) the infant; 3) the husband-wife relationship; and 4) the father's life style and self-image, as a man and a father. This part of the questionnaire consisted of 36 Likert type items responded to on a five point bipolar scale: strongly agree, agree, uncertain, disagree, strongly disagree.

The five alternative responses to each item of the second part of the questionnaire were assigned values ranging from one to five. If a statement indicated the possibility of dis-ease in transition to the paternal role, the response of strongly disagree received a score of five points, and the response of strongly agree received one point. If the statement indicated the likelihood of ease in transition to the paternal role, the scoring was reversed so that the response of strongly disagree received one point and the response of strongly agree received five points. A score of three was assigned to the response of uncertain, for all items. Thus, attitude scores could range from 36 to 180. Items 1, 2, 3, 4, 6, 8,

9, 10, 11, 17, 20, 24, 29, 31, 33, 35, and 36 reflected the possibility of ease in paternal role transition. All other items reflected the likelihood of dis-ease in paternal role transition.

Demographic Data Sheet

A demographic data sheet (see Appendix II) was developed and used for the collection of information from the premature infants' hospital records regarding additional variables assumed to be associated with paternal attitudes toward the paternal role. Data collected regarding the premature infants included: sex, gestational age at birth, birth weight, type of delivery, one and five minute apgar scores, and the infant's neonatal environmental characteristics since his/her birth.

Reliability and Validity of the Research Questionnaire

Two criteria which are used in the assessment of the quality and accuracy of a measurement instrument are reliability and validity. Reliability refers to the accuracy and consistency of a measuring tool as it is used under certain conditions and with certain groups (Diers, 1979; Kerlinger, 1973). The three aspects of reliability are referred to as measures of stability, equivalence, and homogeneity. The consistency of test results on different test administrations to the same sample reflects test "stability" over time. Test equivalence refers to the degree of consistency between different tools applied to the same subjects or between different investigators using one measure on the same data (Diers, 1979; Williamson, 1981). "Homogeneity" refers to the con-

sistency of a person's performance on all items within a test (Anastasi, 1954). Internal consistency of an instrument refers to the homogeneity of the items, that is that the items are, to some extent, measuring the same phenomenon. "If a test has substantial internal consistency, it is interpretable. If a test is composed of a group of items, each measuring a different factor, it is uncertain which factor to invoke to explain the meaning of any one score" (Cronbach, 1951, p. 154).

The test-retest and equivalent form methods for reliability testing were considered unsuitable for this study for the following reason. These methods test the consistency of a measure. Consistency can only be tested in situations where the object being measured is itself stable or unchanging. Attitudes can be subject to change over time. In addition, it was thought that the initial testing may affect the second testing by influencing the subjects' attitudes.

Williamson (1981) stated that the estimation of the internal consistency of a measurement tool reflects the extent to which the responses are influenced by random errors due to the sampling of content. As attitude formation rests on the development of a homogeneous set of beliefs, thoughts, feelings, and intentions which are consistent with one another, it is important to determine if all the items contained within a tool measuring attitudes are, in fact, measuring the attitudes in question. Cronbach's alpha coefficient of reliability, a measure of item homogeneity, was used to test the internal consistency of the final questionnaire used in the study. A coefficient of reliability of .87 was obtained suggesting a moderage degree of internal consistency for the items measuring paternal attitudes on

becoming a father of a premature infant.

Kerlinger (1973) states that the subject of validity is complex and controversial but important to consider in any research. Anastasi (1954) points out "that validity concerns the degree to which a test fulfills its function" (p. 28). Thorndike and Hagan (1961) define validity as, "the extent to which a test measures what we want to measure" (p. 160). A test, or parts therein, may measure a phenomenon different from what the test appears to or is intended to measure (Ebel, 1966).

The assessment of the validity of an instrument is specific to the given group of individuals tested, to the treatment administered, and to the purpose for testing. Test validation requires empirical investigation but is hampered by the lack of good criteria measures and by the logical and operational limitations of the concept itself (Ebel, 1972 in Craig, 1975). The initial and fundamental types of validity include face and content validity. In this study, face and content validity were established in a pilot study.

Mehrens (1978) states that "content validity is related to how adequately the test content samples the domain about which inferences are to be made" (p. 124). Kerlinger (1973) further points out that, "each item must be studied, weighed for its presumed representativeness of the universe..., and judged for its presumed relevance to the property being measured" (p. 459). In this study, content validity of the questionnaire was established by identifying, through a review of the literature and the use of personal neonatal

nursing experience, important facets of paternal role transition to be represented in the questionnaire. The original questionnaire was then submitted to four independent content experts from the following fields: two from maternal-child nursing, one from social services, and one from family studies. The content experts were selected on the premise that each possessed a degree of expertise in content applicable to paternal role transition and families of premature infants.

A priori to the assessment of the tool and its items by the content experts, an agreement level of 75% among judges was established for exclusion or retention of any item. The four content experts, on the basis of independent judgement, agreed that the demographic and pyschosocial variables which had been identified appeared to be associated with paternal attitudes toward becoming a father. Suggestions concerning minor changes in wording were incorporated to enhance the clarity of meaning of some of the items. Five items in part two of the questionnaire were eliminated as these items, according to the judges, lacked clarity with regard to the meaning of the content being addressed in each of them.

Simply defined, face validity means a test appears to measure what it purports to measure. The judgement of the apparent reasonableness, relevance, meaningfulness, and clarity of a tool and its items made by potential subjects or users reflects the face validity of the tool and its items (Cronbach, 1970). An estimate of the face validity of the questionnaire was established by administering the tool to ten first-time fathers of hospitalized

premature infants. The sampling criteria set for the pilot study was identical to that set for the larger scale study. The ten fathers unanimously judged that the items on the questionnaire were relevant and meaningful to their present experiences of becoming parents of hospitalized premature infants. Certain items in part one of the questionnaire were reworded as suggested by the fathers. One father thought that there was inadequate space for responses to some of the open-ended questions. Five items in the second part of the questionnaire viewed by two fathers as unclear, ambiguous, irrelevant, or uncertain in meaning were eliminated.

In summary, following the pilot study, 10 items were discarded from the second part of the questionnaire: 5 on the basis of the content experts judging them as unclear in meaning and 5 on the basis of the fathers regarding them as unclear in meaning.

The Pilot Study

A pilot study, involving ten first-time fathers of hospitalized premature infants, was conducted to test the planned procedure for administering the questionnaire to the fathers, to establish the face and content validity of the questionnaire, and to make the necessary modifications in the method of data collection or the questionnaire. Permission to conduct the study in a neonatal intensive care nursery of a large urban general hospital was obtained from the Medical Director of the Neonatal Intensive Care Nursery, the Director of Nursing Services, and the hospital research review committee.

The pilot study demonstrated that it was feasible to conduct the study, as planned, utilizing a questionnaire individually administered to the participants by the investigator. It also revealed that fathers required about 15 minutes to complete the questionnaire. The face and content validity of the questionnaire was established.

Data Collection

Setting

Data were collected in the neonatal intensive care nurseries of two large general city hospitals. Each of the two nurseries housed over 20 infants requiring intensive medical care.

Procedure

Permission to conduct the study was obtained from the Neonatal Intensive Care Nursery Medical Directors, the Directors of Nursing, and the hospital research review committees of two large, urban general hospitals. On reviewing the sampling criteria with the medical, nursing, and social work staff in each nursery, the investigator identified those fathers who met the criteria. The first 40 fathers meeting the criteria were contacted by the investigator by telephone or in person when their infants were at least five days old. Arrangements were made to meet both parents in the hospital, when they came to visit the infant. Both parents were told that their names had been obtained from the hospital records and that a study was being conducted with first-time fathers concerning their attitudes toward becoming a father of a premature infant. The investigator expressed her interest in promoting family involvement

in the neonatal intensive care nursery. It was pointed out that information from this study could increase nurses' awareness and understanding of the feelings, thoughts, and actions of fathers when their newborn infants are hospitalized, and thus, may help nurses to improve their nursing interventions. No father refused to participate in the study.

At the subsequent meeting, the cooperation of the parents was sought, following an explanation, as outlined in the Informed Consent Form (see Appendix III), of the purpose of the study, how it would be conducted, and what a participant's involvement would include. Both parents were requested to carefully read and then sign the consent form, if they were still willing to participate in the study. The investigator stressed the importance of the father answering the questionnaire independently. The fathers were encouraged to discuss the questionnaire with their spouses after they had completed it, but were asked not to change their responses in doing so. The questionnaire, with a self-addressed, stamped envelope was then given to the father. The fathers were asked to complete the questionnaire at home and to return it as soon as possible since the study was about the early attitudes of fathers while their infants were still hospitalized.

Sample

All first-time fathers whose infants were patients, since their birth, in the neonatal intensive care nurseries utilized in the study and who met the sampling criteria of the study were eligible to serve as subjects in the study. The study sample con-

sisted of the first 40 first-time fathers of hospitalized premature infants who met the following criteria established to determine inclusion of fathers in the study: 1) the fathers were first-time fathers of singleton infants who were between 30 and 36 weeks old gestationally at the time of birth and free of congenital anomalies and surgical interventions; 2) the condition of the fathers' infants was stable (i.e., the infants' vital signs had been stable for a minimum of twenty-four hours); 3) the fathers were capable of reading, writing, and comprehending English; 4) the fathers were living with their infants' mothers (although not necessarily married); and 5) the parents intended to parent the child together.

All of the study participants were Caucasian. The subjects' ages ranged from 20 to 40 years, with a mean age of 27.55 years. A greater percentage of fathers listed grade school (10%) or high school (45%) as their highest educational achievement than technical college or its equivalent (35%). A small percentage of fathers had acquired a university degree (10%). The fathers' occupations varied to some extent. Five of the fathers were unemployed at the time of the study. Three of the fathers identified themselves as self-employed. Twenty-one of the fathers were employed in either a trade or skill related occupation. Eleven of the fathers held either technical or professional positions. The annual family income ranged from less than $15,000 to more than $45,000. About 42% of the fathers reported having an annual family income which fell in the range of $15,000 to $30,000. All of the fathers were living with their infants' mother.

Among the fathers' infants, there were 20 girls and 20 boys. The infants were singleton births and were patients in a neonatal intensive care nursery. Twenty-one of the infants were delivered vaginally, while 19 were delivered by caesarian section. The infants' gestational ages at birth ranged from 30 to 36 weeks, with a mean gestational age of 32.9 weeks. The infants' birth weights ranged from 870 to 2880 grams, with a mean birth weight of 1910 grams. The paternal and infant demographic characteristics are presented, by frequency, in Tables I and II.

Data Analysis

All data were coded and put into a SPSS file (Statistical Packages for the Social Sciences). Frequency counts and cross-tabulations were performed on the data in order to describe the fathers and their infants with respect to the demographic and psychosocial variables being studied.

The responses of a father to the 36 items of the second part of the questionnaire comprised his attitude score. The attitude score of each father was determined by calculating the total number of points the father received through his responses to the Likert type statements, arranged from "strongly agree" to "strongly disagree" and assigned points ranging from one to five. The mean, median, and modal scores on the items reflecting the fathers' attitudes toward becoming a father were computed.

Factor analysis is "a method for determining the number and nature of underlying variables among larger numbers of measures" (Kerlinger, 1973, p. 659). A factor is a hypothetical entity that

TABLE I

DEMOGRAPHIC VARIABLES RELATED TO THE FATHERS

Demographic Characteristic	Absolute Frequency	Relative Frequency	Cumulative Frequency
Age			
20-25	18	45.0	45.0
26-30	9	22.5	67.5
31-35	8	20.0	87.5
36-40	5	12.5	100.0
Education			
Grade School	4	10.0	10.0
High School	18	45.0	55.0
Trade School	9	22.5	77.5
College	5	12.5	90.0
University	4	10.0	100.0
Occupation			
Unemployed	5	12.5	12.5
Self-employed	3	7.5	20.0
Trade/Labor	21	52.5	72.5
Technical	5	12.5	85.0
Professional	6	15.0	100.0
Annual Income			
Less than $15,000	6	15.4	15.4
$15,001-30,000	17	43.6	59.0
$30,001-45,000	11	28.2	87.2
More than $45,000	5	12.8	100.0[a]

[a]One father did not respond to this item.

TABLE II

DEMOGRAPHIC VARIABLES RELATED TO THE INFANTS

Neonatal Characteristic	Absolute Frequency	Relative Frequency	Cumulative Frequency
Sex			
Male	20	50.0	50.0
Female	20	50.0	100.0
Gestational Age (Weeks)			
30-32	16	40.0	40.0
33-35	20	50.0	90.0
36	4	10.0	100.0
Birthweight (Grams)			
Less than 900	1	2.5	2.5
900-1400	10	25.0	27.5
1401-1900	11	27.5	55.0
1901-2400	15	37.5	92.5
More than 2400	3	7.5	100.0
Apgar Score at one minute			
Less than 5	9	22.5	22.5
5-7	24	60.0	82.5
More than 7	7	17.5	100.0
Apgar Score at five minutes			
Less than 5	1	2.5	2.5
5-7	8	20.0	22.5
More than 7	31	77.5	100.0

is assumed to underlie measures (Kerlinger, 1973). Factor analysis was utilized to identify the major factors that were actually being measured and to examine the extent to which the five components underlying paternal attitudes relevant to becoming a father identified a priori, corresponded to the derived factors. This procedure was based on the assumption that the items which measure the same component underlying paternal attitudes relevant to becoming a father will tend to correlate and load on the same factor. Factor analysis was performed on the 36 items to obtain a solution which explained a reasonable proportion of the variance and seemed to be consistent with the a priori identified components underlying paternal attitudes on becoming a father. Factor scores were calculated for each father on the factors identified as actually being measured.

Correlation values indicate the strength of an association between two variables. The specific technique used depends on whether the variables being considered are measured at a nominal, interval, or ordinal level. Spearman's rank order correlation coefficient is an ordinal scale correlation measuring technique without a notion of linearity (Williamson, 1981). It compares the ranking of two sets of data to determine their relationship. Spearman's rank order correlation coefficient was used to calculate the correlation between the psychosocial and demographic variables and the fathers' factor scores on the factors identified as actually being measured by the attitudinal scale in an attempt to simplify the interpretation of the findings.

In order to identify which of the variables were the

best predictors of the fathers' scores along each of the factors identified as actually being measured, stepwise multiple regression was conducted.

Summary

In this study, a self-administered questionnaire was developed to measure paternal attitudes relevant to becoming a father of a hospitalized premature infant and some identified pyscho-social and demographic variables. The face and content validity of the instrument was established in a pre-test, and then administered to a convenience sample of 40 first-time fathers of hospitalized premature infants.

Frequencies and cross-tabulations were performed on the data to describe the sample in terms of the identified demographic and psychosocial variables. Factor analysis was performed to identify what factors were actually being measured by the attitude scale. Spearman rank-order correlation and stepwise multiple regression were conducted to determine what variables correlated with and predicted the factors identified as measuring the paternal attitudes on becoming a father.

CHAPTER IV

FINDINGS

The study's findings are presented under the following headings and in the following order: the intervening variables concerning the fathers, the infants, and the mothers; the fathers' attitudes toward becoming a father of a hospitalized premature infant; and the relationship of the fathers' attitudes and the intervening variables concerning the fathers, the infants, and the mothers.

The Intervening Variables

Paternal Family Background

The physical and social living conditions of the 40 fathers varied. While 17 of the fathers had spent their childhood years in urban settings, 22 had spent the majority of their childhood years in rural areas. One father did not respond to this item. Thirty-eight of the fathers had been raised throughout their childhood in their own natural families. One father had been raised by relatives for most of his childhood, since his parents had died when he was quite young. Another father indicated that, throughout his childhood, he had spent periods of time in various households other than his natural one. Four of the fathers had been the only child in the family, while 36 had grown up with siblings.

Twenty-one of the fathers reported that both of their parents had been an important part of their caretaking and development as children. In the case of 13 of the fathers, the mother was

thought to have been the central figure in the fathers' caretaking and development as children. Two of the fathers stated that their fathers had been the most important person for their development and caretaking as children. In the one instance, the parents had separated; in the other case, the mother had died. A relative was reported by 3 of the fathers as having been the most important person in their caretaking and development as children. One father considered he, himself, as having been the most important person in his caretaking and development as a child.

For the most part, the paternal fathers had participated in and assumed responsibility for childbearing and childrearing. Although 9 of the fathers indicated that, during their childhood, their fathers' participation and responsibility in childrearing and child caretaking had been minimal, 21 thought it had been fairly active. Seven of the fathers thought that both of their parents had participated equally in childrearing and child caretaking. Three of the fathers reported that their fathers had been primarily responsible for childrearing and child caretaking in their families. For these fathers, the greater paternal participation in childrearing and child caretaking appeared to be associated with parental separation or death of a mother.

Most of the paternal fathers rather than the mothers had been employed outside the home. Of the 40 fathers, 35 reported that, during their childhood, their fathers had worked outside the home. Of these fathers, 33 had been employed full time and 2 had been employed part time and full time at different times. Five of the

fathers had not been employed outside the home. Of the 40 paternal mothers, 3 had been employed outside the home full time; 11 had been employed part time; and 26 had not been employed, at any time, during the fathers' childhood.

On the whole, the fathers had had little caretaking experience with infants and young children. Twenty-two of the fathers reported that, prior to their infants' birth, they had had minimal to no experience with infant caretaking. Thirteen of the fathers indicated that they had had at least some experience with infant caretaking. A small number of fathers (5) had had considerable experience with the caretaking of infants. With regard to the caretaking of young children, 11 of the fathers reported that they had had minimal to no experience in this area. Ten of these fathers had also had minimal to no experience with infant caretaking. Twenty of the fathers had had at least some experience with child caretaking; while 9 had had considerable experience.

The majority of the fathers judged their knowledge of infant and child caretaking to be poor. While 13 of the fathers rated their knowledge level to be poor to very poor, 20 considered it to be fair. Good to very good knowledge of caretaking was reported by 7 of the fathers. The majority of the fathers had not read much about infant and child care. Twenty-six of the fathers had read minimally, while a small number of fathers (3) reported that they had read a considerable amount about infant and child care.

Paternal Experiences During Antepartal, Intrapartal, and Postpartal Events

Prior to the past pregnancy, most of the fathers (32) had anticipated having children. Three of the fathers had been undecided in terms of having children and 5 had not anticipated having children. The majority of the fathers (23) had had no preference in regard to the sex of their infants. A preference for a boy was reported by 14 of the fathers, while 3 indicated a preference for a girl. The past pregnancy was considered by 22 of the fathers as having been planned. Eighteen of the fathers viewed the pregnancy as having been unplanned. Twenty-three of the fathers had attended at least 3 prenatal classes while 17 had not attended any classes. Twenty-nine of the fathers reported that they planned to have more children and 8 were undecided. Three of the fathers reported they were not planning to have any more children.

The fathers' experience with regard to their wives' labor and delivery of their infants varied. Only the wives' labor had been attended by 14 of the fathers. Twelve of the fathers had not been present for either the labor or the delivery of their infants. Of these 26 deliveries, 19 had been by caesarean section. Thirteen of the 21 fathers whose wives had delivered vaginally had been present for both their wives' labor and delivery of their infants. One father reported that he had only attended his baby's delivery. Of the 26 fathers who had not been present for their infants' birth, 18 had seen their infants within 20 to 45 minutes after the delivery. Two of the fathers had first seen their infants about 2 hours after

delivery, while 2 of the fathers had not seen their infants until 2 to 3 days postpartum. Four fathers did not provide information about this point.

Most of the fathers had been accompanied by someone during their first visit to the nursery. Eighteen of the fathers stated that, when they had visited their infants in the neonatal intensive care nursery for the first time they had been accompanied by their wives. Ten of the fathers had been accompanied by other people: 6 by neonatal nurses and 4 by family members. Twelve of the fathers had made their first visit to their infants in the neonatal intensive care nursery by themselves.

The frequency of the fathers' visits to the nursery also varied. A large number of fathers (25) reported that they visited their infants every day. One father who visited his infant every day wrote, "It would be more often if work pressures did not force me to reduce the visits." Three of the fathers had been visiting several times a day since their infants' birth. Three of the fathers indicated that they visited their infants as often as possible or every chance they had. Seven of the fathers reported that they visited about twice a week. One father stated that he could only visit every one to two weeks since he lived outside of the city. Another father who worked outside of the city stated that he visited as often as possible during the weekends. None of the fathers indicated that they were unable to visit their infants in the hospital.

More than half of the fathers (28) had been encouraged to touch their infants by one of the following people: nurse (18),

wife (6), self (3), and medical staff (1). At the time of data collection, 39 of the fathers had touched their infants. One father, who stated that he had been encouraged to do so, had not yet touched his infant. Most of the fathers (30) had first touched their infants during the first postpartal day. Fourteen of the fathers had touched their infants within one hour after their infants' birth. Nine of the fathers had first touched their infants on the second and third postpartal day. One of these fathers had not seen his infant until the third postpartal day. The fathers' description of their feelings on touching their infants for the first time included such positive feelings as pride, elation, and joy and less positive ones such as fear, nervousness, and pity.

The activities which the fathers undertook when they visited their infants in the nursery indicated that they were attempting to interact with their infants. Twenty-two of the fathers mentioned that they talked to, touched, held, photographed, looked at, or tickled the infant. Seventeen of the fathers, in addition, carried out caretaking activities such as, feeding, diapering, and holding the infant; changing the infant's bedding; and putting on the infant's eye pads when the infant was receiving phototherapy. The father who had not yet touched his infant reported that he had looked at his infant.

On the whole, the fathers' estimation of their understanding of their infants' medical condition seemed to be adequate. The majority of the fathers (30) reported possessing good to very good understanding of their infants' condition. Seven of the fathers

reported that they possessed a fair understanding of their infants' medical condition. The understanding of their infants' condition was rated as poor by 3 of the fathers. The characteristics of the intervening variables related to the paternal antepartal, intrapartal, and postpartal experiences are summarized in Tables III, IV, and V.

The Infants' Condition

The infants' requirements for warmth varied. For the most part, the infants (39) had been cared for in isolettes. The duration of time spent by these infants in their isolettes ranged from 3 to 16 days. Three of these infants had been cared for under an overhead radiant heater for a period ranging from 1 to 7 days. One infant was still being nursed under an overhead radiant heater and had not been placed in a crib or isolette at the time of data collection. Three of these 39 infants had been in cribs for at least 4 days at the time of data collection.

The amount and type of oxygen therapy required by the infants varied. Fifteen of the infants had not required oxygen therapy. Sixteen of the infants had required artificial ventilation for a period ranging from 1 to 16 days. At the time of data collection, 13 of these infants no longer required oxygen therapy. Of the remaining 3 infants, 1 still required mechanical ventilation, while 2 were receiving continuous positive airway pressure (CPAP). Two of the infants had received oxygen for 1 day but were not receiving any at the time of data collection. The 4 infants who had received oxygen therapy via continuous positive airway pressure or artificial ventilation were not receiving any oxygen therapy at the time of

TABLE III

INTERVENING VARIABLES RELATED TO PATERNAL ANTEPARTAL EVENTS

Antepartal Event	Absolute Frequency	Relative Frequency	Cumulative Frequency
Number of Children Anticipated			
None	5	13.0	13.0
1-2	22	55.0	68.0
3-4	10	25.0	93.0
More than 4	0	0.0	93.0
Undecided	3	7.0	100.0
Pregnancy			
Planned	22	55.0	55.0
Unplanned	18	45.0	100.0
Prenatal Classes			
Attended	23	57.5	57.5
Not Attended	17	42.5	100.0
Experience with Infant Caretaking			
Considerable	5	12.5	12.5
Some	13	32.5	45.0
Minimal	12	30.0	75.0
None	10	25.0	100.0
Experience with Child Caretaking			
Considerable	9	22.5	22.5
Some	20	50.0	72.5
Minimal	9	22.5	95.0
None	2	5.0	100.0

TABLE III (Continued)

INTERVENING VARIABLES RELATED TO PATERNAL ANTEPARTAL EVENTS

Antepartal Event	Absolute Frequency	Relative Frequency	Cumulative Frequency
Amount Read on Infant/ Child Caretaking			
Considerable	3	7.5	7.5
Some	12	30.0	37.5
Minimal	14	35.0	72.5
None	11	27.5	100.0
Knowledge of Infant/ Child Caretaking			
Very Good	3	7.5	7.5
Good	4	10.0	17.5
Fair	20	50.0	67.5
Poor	11	27.5	95.0
Very Poor	2	5.0	100.0
Sex Preference			
Male	14	35.0	35.0
Female	3	7.5	42.5
No Preference	23	57.5	100.0
Number of Years Living with Infant's Mother			
Less than 1	8	20.0	20.0
1-2	10	30.0	50.0
3-4	7	17.5	67.5
More than 4	15	37.5	100.0

TABLE IV

INTERVENING VARIABLES RELATED TO PATERNAL INTRAPARTAL EVENTS

Intrapartal Event	Absolute Frequency	Relative Frequency	Cumulative Frequency
Presence at Labor and Delivery			
Labor only	14	35.0	35.0
Delivery only	1	2.5	37.5
Both	13	32.5	70.0
Neither	12	30.0	100.0
Method of Delivery			
Vaginal	21	52.5	52.5
Caesarean Section	19	47.5	100.0

TABLE V

INTERVENING VARIABLES RELATED TO PATERNAL POSTPARTAL EVENTS

Postpartal Event	Absolute Frequency	Relative Frequency	Cumulative Frequency
Number of More Children Anticipated			
None	3	7.5	7.5
1-2	25	62.5	70.0
3-4	4	10.0	80.0
More than 4	0	0.0	80.0
Undecided	8	20.0	100.0
Frequency of Visits to the Infant			
Every Day	25	63.0	63.0
Every Two Days	7	17.0	80.0
Other	8	20.0	100.0
Unable to visit	0	0.0	100.0
Understanding of the Infant's Condition			
Very Good	13	33.0	33.0
Good	17	43.0	76.0
Fair	7	17.0	93.0
Poor	3	7.0	100.0
Very Poor	0	0.0	100.0

data collection. Oxygen had been flowing into the isolettes of 7 infants for a period ranging from 1 to 15 days. At the time of data collection, only one of these infants remained on oxygen therapy via the isolette.

The infants received their oral feedings by bottle, gavage, or breast. At the time of data collection, 39 of the infants were receiving oral feedings. The infants' oral feedings consisted of expressed breast milk. Five of the infants were being breast fed in addition to being alternately fed by bottle and gavage. Three of the infants were being totally bottle fed; 13 were being totally gavage fed; and 6 were being fed alternately by bottle and gavage. Twenty-seven of the 39 infants receiving oral feedings had been on total oral feedings for a period ranging from 1 to 13 days. One infant who had not yet received an oral feeding was receiving total parenteral nutrition. Twelve of the infants had received oral feedings in addition to intravenous fluids for a period ranging from 5 to 15 days.

With respect to the other aspects of the infants' condition, all of the infants had been and remained on cardiac monitors since birth. Thirty-one of the infants had received phototherapy for a period ranging from 1 to 6 days. Twenty-four of the infants had required other forms of therapy for a period ranging from 1 to 15 days after birth. These therapies included the use of chest tubes, umbilical arterial catheters, temperature skin probes, and nasogastric tubes. Various medications had been administered to 28 infants. These drugs included sedatives, antibiotics, bronchodi-

lators, cardiac stimulants, antifungal agents, and vitamins. The characteristics of the intervening variables related to the infants' neonatal environment are summarized in Table VI.

Characteristics of the Spouses

The wives of the fathers varied with regard to their employment status, prenatal history, and type of delivery. Throughout the past pregnancy, 24 of the wives had been employed full time, while 5 had been employed on a part time basis. Two of the fathers did not indicate if their employed wives had worked full or part time.

According to the fathers, 11 of the wives, 9 of whom had worked outside the home prior to the infants' birth, were planning to work outside of the home when the infant went home. Of these 11 mothers, 6 were planning to work full time while 4 were planning to work part time. No preference was stated for one wife. Sixteen of the mothers were not planning to work outside of the home; 13 of the mothers had not decided about their future employment status.

Some of the wives were reported to have had problems which required medical attention during the past pregnancy. Of the 40 fathers, 24 indicated that their wives had experienced a medical complication during the pregnancy. The types of medical problems and number of mothers afflicted reported by the fathers included: toxemia (5), vaginal bleeding (5), premature rupture of the membranes (3), infection (2), chronic illness (2), threatened miscarriage (2), vomiting (1), fall (1), and unknown (2). The characteristics of the intervening variables related to the mothers are summarized in Table VII.

TABLE VI

INTERVENING VARIABLES RELATED TO THE INFANTS' NEONATAL ENVIRONMENT

Neonatal Environment	Number of Days Exposed to the Neonatal Environment			
	Less than 5	5-10	More than 10	None
Accommodation				
Overhead Heater	2	1	1	36
Isolette	2	13	24	1
Open Crib	1	2	0	37
Oxygen Therapy				
Isolette	3	3	1	33
Oxyhood	6	0	0	34
Continuous Positive Airway Pressure (CPAP)	13	1	0	26
Artificial Ventilation	12	2	2	24
Feeding Method				
Intravenous	22	10	1	7
Intravenous and Oral	20	14	2	4
Oral	8	15	3	14
Other Forms of Therapy				
Cardiac Monitor	0	3	37	0
Phototherapy	23	8	0	9
Other (chest tubes, umbilical arterial line, radial lines, temperature control probe)	12	5	7	16

TABLE VII

INTERVENING VARIABLES RELATED TO THE MOTHERS

Maternal Characteristic	Absolute Frequency	Relative Frequency	Cumulative Frequency
Employed during Pregnancy			
Yes	31	77.5	77.5
No	9	22.5	22.5
Type of Prenatal Employment			
Full Time	24	82.8	82.8
Part Time	5	17.2	100.0[a]
Prenatal Medical Complications			
Present	24	60.0	60.0
Not Present	16	40.0	100.0
Employment Plans Postpartum			
Yes	11	27.0	27.0
No	16	40.0	67.0
Undecided	13	33.0	100.0
Type of Postpartal Employment			
Full Time	6	60.0	60.0
Part Time	4	40.0	100.0[a]

[a]Two fathers did not provide this information.

Paternal Attitudes on Becoming a Father of a Hospitalized Premature Infant

On the whole, the paternal attitude scores relevant to becoming a father of a hospitalized premature infant were generally high. The scores which had been determined from the fathers' responses to the 36 items of the second part of the questionnaire ranged from 107 to 169. The possible attitude score range for the itemized scale ranged from 36 to 180. The mean, median, and mode of the paternal attitude scores were 143.0, 145.8, and 146.0 respectively. The high attitude scores indicate that, by two weeks postpartum, the fathers in this study may have been experiencing ease in the transition to the paternal role.

In this section, the results of the factor analysis of the itemized scale is reported. The factor analysis revealed the aspects that were actually underlying the paternal attitudes on becoming a father of a hospitalized premature infant. This is followed by a description of the relationships which were found to hold between the intervening variables and the factors identified as underlying the paternal attitudes relevant to becoming a father of a hospitalized premature infant. The results of the stepwise regression analysis, the identification of the potential predictors of each factor underlying the paternal attitudes, are then presented.

Factor Analysis of the Itemized Scale

A number of factors were identified a priori as underlying paternal attitudes relevant to becoming a father of a premature infant. Factor analysis of the attitude scale was performed

to identify the factors that were actually being measured in this study. A principle orthogonal solution using varimax rotation was found to be the most interpretable solution and accounted for 68.6% of the total variance. All of the five identified factors had eigenvalues greater than one. The five factor structure solution is shown in Table VIII.

By examining the items which loaded high on each factor, the major items underlying paternal attitudes relevant to becoming a father of a hospitalized premature infant were identified. Each factor and the items with high loadings, that is, greater than .45, are described separately in relation to their theoretical significance. It should be kept in mind that, items with low loadings contributed indirectly to the description of the factor, by suggesting what the factor was not.

Factor I: Self-image as a Father

The first factor was labelled self-image as a father, since the items were related to the fathers' feelings and conceptions with regard to being in the paternal role. This factor explained 28.9% of the variance. Six of the items had loadings greater than .45. The items which loaded positively on this factor included: the happiness felt by the father on becoming a father, the importance of the father's visits to his infant, the baby's need for the father's attention, the father's fear of holding his infant, and the father's conception of being a failure as a father. The item, the father's fear with regard to caretaking, had a moderately high positive loading.

TABLE VIII

RESULTS OF FACTOR ANALYSIS OF PATERNAL ATTITUDE SCORES - ORTHOGONAL SOLUTION VARIMAX ROTATION (36 Items)

Item Number	Item Content	Communalities	Factors				
			I	II	III	IV	V
20.	I am not afraid to hold my baby.	0.852	0.714	0.219	0.188	0.053	0.296
1.	Being a father is a happy experience for me.	0.592	0.675	0.181	0.161	0.055	0.213
10.	My baby needs a lot of attention from me.	0.857	0.667	0.331	0.027	0.410	0.104
18.	I feel that I have failed because my baby was born prematurely.	0.521	0.633	-0.085	0.010	0.127	0.039
5.	I am often in the way when I visit my baby.	0.718	0.621	-0.048	0.302	0.151	0.013
7.	I am somewhat fearful of helping care for my baby when he/she is so small.	0.862	0.465	-0.016	0.032	-0.004	0.030
11.	I am a great source of support for my wife.	0.691	0.141	0.722	0.033	0.205	0.025
26.	Since my baby's birth, I have little time for myself.	0.595	0.085	-0.667	0.235	0.110	0.112
35.	My wife thinks I have been supportive since our baby's birth.	0.740	0.046	0.631	0.088	0.129	0.272
29.	I get a great deal of pleasure from touching my baby.	0.697	0.274	0.537	0.314	-0.006	0.183

TABLE VIII (Continued)

RESULTS OF FACTOR ANALYSIS OF PATERNAL ATTITUDE SCORES - ORTHOGONAL SOLUTION VARIMAX ROTATION (36 Items)

Item Number	Item Content	Communalities	Factors				
			I	II	III	IV	V
33.	I have gained confidence in touching my baby since his/her birth.	0.715	0.116	0.524	0.162	-0.005	0.467
9.	Touching my baby makes me feel more like he/she is mine.	0.540	0.288	0.466	0.127	0.017	0.016
12.	It is difficult to love this baby so soon.	0.923	0.026	0.065	0.936	0.025	0.009
21.	I don't feel like a father to this baby yet.	0.758	0.262	0.008	0.793	0.011	0.011
16.	My baby looked ugly to me at first.	0.876	0.265	-0.051	0.560	0.381	0.011
3.	My baby looked beautiful to me at first.	0.841	0.367	-0.159	0.461	0.279	0.038
27.	It is not as important for me to visit our baby as it is my wife.	0.983	0.115	0.270	0.024	0.887	0.097
30.	As long as my wife takes care of our baby, it is not necessary for me to do so.	0.843	0.259	-0.124	0.155	0.835	0.032
17.	Helping my wife with our baby makes my adjustment to the baby a lot easier.	0.745	-0.070	0.229	-0.044	0.486	0.200
28.	My baby looks like all other babies.	0.742	0.065	-0.001	-0.041	0.474	0.333

TABLE VIII (Continued)

RESULTS OF FACTOR ANALYSIS OF PATERNAL ATTITUDE SCORES - ORTHOGONAL SOLUTION VARIMAX ROTATION (36 Items)

Item Number	Item Content	Communalities	Factors				
			I	II	III	IV	V
19.	My baby is still quite ill.	0.898	0.111	-0.031	-0.057	0.131	0.905
24.	I am as involved in my baby's care as is my wife.	0.677	0.414	0.096	0.051	0.013	0.596
8.	I would not change anything about my baby.	0.715	0.436	0.148	0.140	0.033	0.564
25.	I have doubts about whether I will be a good father to my infant.	0.741	0.285	-0.009	-0.007	-0.021	-0.056
23.	I do not have a close relationship with my baby.	0.737	0.272	0.366	0.109	0.085	0.264
31.	My baby's birth has brought my wife and I closer together emotionally.	0.579	0.214	0.254	-0.152	-0.015	0.213
2.	My baby has some features like his/her mother.	0.669	0.010	0.180	0.165	0.097	0.128
4.	My baby seems to have a personality of his/her own.	0.567	0.203	0.015	-0.098	-0.073	0.016
6.	My baby has some features like mine.	0.891	0.138	-0.079	0.330	-0.228	0.163
13.	I am afraid I might hurt my baby when I touch him/her.	0.893	0.001	0.012	0.246	0.081	0.098

TABLE VIII (Continued)

RESULTS OF FACTOR ANALYSIS OF PATERNAL ATTITUDE SCORES - ORTHOGONAL SOLUTION VARIMAX ROTATION (36 Items)

Item Number	Item Content	Communalities	Factors				
			I	II	III	IV	V
14.	My baby needs a lot of attention from my wife.	0.527	-0.099	-0.252	0.126	0.036	-0.174
15.	My wife knows more about babies than I do.	0.589	0.081	0.001	0.167	0.044	0.216
22.	My wife does a better job caring for my baby if I am not involved.	0.689	0.048	-0.278	-0.023	0.136	0.151
34.	It will be easier for me to feel closer to my baby when he/she is no longer in the intensive care nursery.	0.671	0.031	0.027	0.162	-0.030	0.267
36.	My wife needs a lot of support from me right now.	0.467	0.050	0.086	-0.058	0.113	0.363
	Eigenvalue		7.538	3.679	2.891	1.993	1.816
	Proportion of Variance Explained by Each Factor (Total 68.6%)		28.9%	14.1%	11.1%	7.6%	7.0%

Factor II: Paternal Relationships

The second factor was called the father's relationships within the family, since the items were related mainly to the father's interactions with his hospitalized premature infant and his spouse. This factor explained 14.1% of the variance. Two of the items with high positive loadings included: the father being a support figure for his wife and the father's conception of his wife's evaluation of his support. One item, concerning the amount of time the father thought he had for himself since his infant's birth, loaded highly negatively. The items referring to the touching of the infant, the receiving of pleasure from tactile contact with the infant, and paternal confidence in touching the infant, had moderately high positive loadings.

Factor III: Paternal Feelings of Engrossment

The third factor was labelled paternal feelings of engrossment, since the items were related to paternal emotional and visual awareness of the infant. This factor explained 11.1% of the variance. The items referring to paternal difficulty in loving the baby and father-infant attachment had high positive loadings. Two of the items relating to the child's outward appearance had moderately high positive loadings.

Factor IV: Parental Role Differentiation

The fourth factor was titled parental role differentiation, since the items were reflective of beliefs concerning both maternal and paternal role enactment. This factor explained 7.6% of the variance. Four of the items loaded on this factor. Two of the

items which referred to the importance of the wife visiting and caring for the hospitalized infant had high positive loadings. The item concerning the importance of both parents' involvement in their infant's caretaking had a moderately high positive loading. The item, the perception of the infant as having a similar appearance to all other babies in the nursery, loaded moderately high. This last item may refer to the need of parents to perceive their infant as unique in order to develop distinctive parental roles in caring for the child.

Factor V: The Preterm Infant

The fifth factor was labelled preterm infant, since the items were related to the characteristics of the premature infant and the father's interaction with the infant. This factor explained 7.0% of the variance and had three items with high positive loadings: two of the items had to do with the father's conception of his infant's health and the father's acceptance of his infant; one item referred to the father's perception of equal parental involvement in the infant's care.

Relationship of the Intervening Variables and the Factors Underlying Paternal Attitudes

Each of the identified factors: self-image as a father, paternal relationships, paternal feelings of engrossment, parental role differentiation, and the preterm infant correlated significantly with some of the demographic and psychosocial variables measured. The relationships between the intervening variables describing the fathers, the infants, and the mothers and each of the five factors

were calculated using the Spearman rank order correlation coefficient. Summaries of the variables which correlated significantly at the 0.05 and 0.10 levels of significance with each factor underlying paternal attitudes are presented in Tables IX, X, XI, XII, and XIII.

Factor I: Self-image as a Father

Several variables correlated significantly with Factor I, self-image as a father. The fathers' anticipation of having children, prior to their infants' birth, correlated positively with self-image as a father ($p = 0.05$). Other variables which correlated highly with self-image as a father at the 0.05 level of significance included those related to infant feeding. Although a positive correlation was found with regard to the oral feeding of the infants, a negative correlation was found in the case of infant feedings which consisted of both oral feedings and intravenous therapy. The fathers' perception of their own fathers' participation in childrearing and the fathers' participation in labor and delivery correlated positively with Factor I ($p = 0.10$). The infants' birthweight and gestational age both correlated positively with self-image as a father ($p = 0.10$).

Factor II: Paternal Relationships

Some of the intervening variables correlated significantly with Factor II, paternal relationships. The fathers' understanding of their infants' medical condition and the frequency of paternal visits to the nursery correlated positively with paternal relationships ($p = 0.10$). Although a positive correlation was found between infant feedings consisting of a combination of oral feedings and

TABLE IX

SPEARMAN CORRELATION COEFFICIENTS FOR INTERVENING VARIABLES AND FACTOR I (SELF-IMAGE AS A FATHER)

Intervening Variable	Spearman Correlation Coefficient: Factor I	
Paternal Father's Participation in Childrearing	R	0.23
	p	0.08
Spouse Planning to Work Postpartum	R	-0.21
	p	0.09
Anticipation of Children Prior to this Pregnancy	R	0.41
	p	0.01
Anticipation of More Children	R	0.28
	p	0.04
Involvement in Labor and Delivery	R	0.24
	p	0.07
Infant's Gestational Age	R	0.22
	p	0.08
Infant Receiving Oxygen in Isolette	R	0.28
	p	0.04
Infant Feeding Orally and Intravenously	R	-0.42
	p	0.003
Infant Feeding Orally	R	0.45
	p	0.002
Infant's Birthweight	R	0.26
	p	0.05

TABLE X

SPEARMAN CORRELATION COEFFICIENTS FOR INTERVENING VARIABLES AND FACTOR II (PATERNAL RELATIONSHIPS)

Intervening Variable	Spearman Correlation Coefficient: Factor II	
Paternal Age	R	-0.34
	P	0.02
Paternal Mother's Employment Status	R	-0.27
	P	0.04
Frequency of Visits to the Nursery	R	0.25
	P	0.06
Understanding of the Infant's Condition	R	0.25
	P	0.06
Infant Placed in Crib	R	-0.43
	P	0.003
Infant Feeding Orally and Intravenously	R	0.27
	P	0.05
Infant Requiring Other Therapy	R	-0.24
	P	0.07

TABLE XI

SPEARMAN CORRELATION COEFFICIENTS FOR INTERVENING VARIABLES AND FACTOR III (PATERNAL FEELINGS OF ENGROSSMENT)

Intervening Variable	Spearman Correlation Coefficient: Factor III	
Past Experience with Infant Caretaking	R	0.36
	p	0.01
Past Experience with Child Caretaking	R	0.27
	p	0.05
Amount Read on Infant Caretaking	R	0.37
	p	0.01
Self-Rating of Knowledge of Infant Caretaking	R	0.33
	p	0.02
Frequency of Visits to the Nursery	R	0.32
	p	0.02
Understanding of the Infant's Condition	R	0.34
	p	0.02
Preference Regarding Sex of the Infant	R	0.26
	p	0.06
Mode of Delivery	R	-0.27
	p	0.05
Infant Placed Under Overhead Heater	R	-0.23
	p	0.08
Infant Receiving Phototherapy	R	-0.29
	p	0.03
Infant Requiring Other Therapy	R	-0.26
	p	0.05

TABLE XII

SPEARMAN CORRELATION COEFFICIENTS FOR INTERVENING VARIABLES AND FACTOR IV (PARENTAL ROLE DIFFERENTIATION)

Intervening Variable	Spearman Correlation Coefficient: Factor IV	
Paternal Age	R	-0.23
	p	0.07
Paternal Educational Level	R	-0.24
	p	0.07
Amount Read on Infant Caretaking	R	-0.24
	p	0.07
Infant Receiving Oxygen in Isolette	R	0.28
	p	0.04
Infant Requiring Mechanical Ventilation	R	0.28
	p	0.04
Infant not Receiving Oral Feedings	R	0.26
	p	0.05

TABLE XIN

SPEARMAN CORRELATION COEFFICIENTS FOR INTERVENING VARIABLES AND FACTOR V (THE PRETERM INFANT)

Intervening Variable	Spearman Correlation Coefficient: Factor V	
Past Experience with Infant Caretaking	R	0.26
	P	0.05
Anticipation of Children Prior to This Pregnancy	R	0.54
	P	0.001
Anticipation of More Children	R	0.28
	P	0.04
Infant's Gestational Age	R	0.34
	P	0.02
Infant not Receiving Oral Feedings	R	-0.22
	P	0.09

intravenous therapy and Factor II ($p = 0.10$), a low negative correlation was identified between other types of therapy received by the infants and paternal relationships ($p = 0.10$). The following variables correlated negatively with paternal relationships at the 0.05 level of significance: the age of the father and the placement of the infant in an open crib.

Factor III: Paternal Feelings of Engrossment

Many intervening variables correlated significantly with Factor III, paternal feelings of engrossment. Paternal experience with infant care, the amount read by the father about infant caretaking, and paternal self-rating of knowledge of infant caretaking correlated positively with Factor III ($p = 0.05$). Both the fathers' understanding of their infants' condition and the frequency of paternal visits to the nursery also correlated positively with paternal feelings of engrossment ($p = 0.05$). Variables which correlated negatively with Factor III included: caesarean delivery, use of phototherapy, and the infants' need for chest tubes, umbilical arterial lines, and temperature skin probes. The placement of the infant under an overhead radiant heater correlated negatively with paternal feelings of engrossment ($p = 0.10$).

Factor IV: Parental Role Differentiation

Three of the intervening variables correlated significantly and positively with Factor IV, parental role differentiation: infants receiving oxygen therapy via their isolettes, infants receiving oxygen therapy via mechanical ventilation, and no oral feedings of infants

($p = 0.05$). However, the age and educational level of the fathers and the amount read by the fathers about infant caretaking correlated negatively with this factor ($p = 0.10$).

Factor V: The Preterm Infant

Three intervening variables correlated significantly with the fifth factor: the preterm infant. The items concerning anticipation, prior to the infants' birth, of having children; the infants' gestational age; anticipation, after the infants' birth, of having more children; and experience with infant caretaking correlated positively with Factor V ($p = 0.05$). However, a low negative correlation was identified between the variable, no oral feeding of the infants, and this factor ($p = 0.10$).

Predictors of the Five Factors Underlying Paternal Attitudes

A stepwise regression analysis was performed to identify those variables which accounted for the variance in the fathers' factor scores for each factor and to identify the best predictors of paternal attitudes on becoming a father. A summary of the results of the stepwise regression analysis is presented in Table XIV. For each factor the variables which best explain the fathers' scores are listed.

Factor I: Self-image as a Father

There were eight variables, each of which explained at least 1.5% of the variance in the fathers' factor scores related to self-image as a father. In total, these eight variables explained

TABLE XIV

STEPWISE MULTIPLE REGRESSION: PATERNAL ATTITUDE FACTOR SCORES AND INTERVENING VARIABLES

Paternal Attitude Factor	Order of Intervening Variables Entering Stepwise Analysis[a]	Mult r	r square	r sq change	Simple r	B	Beta
I Self-image as a Father	Infant Feeding Orally	0.518	0.268	0.268	0.518	0.424	0.432
	Anticipation of More Children	0.599	0.359	0.091	0.399	0.290	0.217
	Paternal Age	0.633	0.400	0.041	-0.227	-0.517	-0.268
	Infant Receiving Oxygen in the Isolette	0.659	0.434	0.034	0.210	0.334	0.243
	Anticipation of Children Prior to this Pregnancy	0.679	0.461	0.027	0.320	0.245	0.228
	Planning of Pregnancy	0.703	0.495	0.034	-0.330	-0.410	-0.199
	Paternal Father's Participation in Childrearing	0.718	0.516	0.022	0.130	0.207	0.170
	Mode of Delivery	0.733	0.538	0.021	0.092	0.269	0.130
	CONSTANT					-0.674	

[a]Only variables which explained at least 1.5 % of the variance in paternal attitude scores are presented.

TABLE XIV (Continued)

STEPWISE MULTIPLE REGRESSION: PATERNAL ATTITUDE FACTOR SCORES AND INTERVENING VARIABLES

Paternal Attitude Factor	Order of Intervening Variables Entering Stepwise Analysis[a]	Mult r	r square	r sq change	Simple r	B	Beta
II Paternal Relationships	Infant Placed in a Crib	0.572	0.327	0.327	-0.572	-1.033	-0.428
	Paternal Age	0.689	0.474	0.147	-0.527	-0.104	-0.478
	Infant Requiring Other Therapy	0.724	0.524	0.050	-0.237	-0.376	-0.366
	Planning of Pregnancy	0.764	0.583	0.059	0.323	0.942	0.404
	Mode of Delivery	0.786	0.617	0.034	0.199	0.897	0.385
	Frequency of Visits to the Nursery	0.815	0.665	0.047	0.094	0.218	0.218
	Paternal Educational Level	0.826	0.682	0.017	-0.158	0.337	0.357
	Involvement in Labor and Delivery	0.840	0.705	0.024	0.043	-0.410	-0.429
	Past Experience with Child Caretaking	0.857	0.735	0.030	-0.027	-0.569	-0.365
	Preference Regarding Sex of the Infant	0.872	0.761	0.026	0.070	0.433	0.187
	Past Experience with Infant Caretaking	0.882	0.778	0.017	0.084	0.250	0.217
	CONSTANT					2.465	

[a]Only variables explaining at least 1.5% of the variance in paternal attitude scores are presented.

TABLE XIV (Continued)

STEPWISE MULTIPLE REGRESSION: PATERNAL ATTITUDE FACTOR SCORES AND INTERVENING VARIABLES

Paternal Attitude Factor	Order of Intervening Variables Entering Stepwise Analysis[a]	Mult r	r square	r sq change	Simple r	B	Beta
III Paternal Feelings of Engrossment	Understanding the Infant's Condition	0.374	0.140	0.140	0.374	0.578	0.482
	Infant Requiring Mechanical Ventilation	0.514	0.265	0.125	-0.299	-0.217	-0.162
	Infant Placed in a Crib	0.584	0.341	0.077	0.185	0.996	0.446
	Self-Rating of Knowledge of Infant Caretaking	0.645	0.417	0.075	0.351	0.257	0.227
	Past Experience with Infant Caretaking	0.656	0.430	0.013	0.374	0.255	0.239
	Paternal Educational Level	0.669	0.448	0.018	-0.005	-0.174	-0.199
	Involvement in Labor and Delivery	0.692	0.480	0.031	-0.182	0.210	0.237
	Infant's Gestational Age	0.712	0.502	0.023	0.196	0.148	0.243
	CONSTANT					-7.85	

[a]Only variables explaining at least 1.5% of the variance in paternal attitude factor scores are presented.

TABLE XIV (Continued)

STEPWISE MULTIPLE REGRESSION: PATERNAL ATTITUDE FACTOR SCORES AND INTERVENING VARIABLES

Paternal Attitude Factor	Order of Intervening Variables Entering Stepwise Analysis[a]	Mult r	r square	r sq change	Simple r	B	Beta
IV Parental Role Differentiation	Paternal Age	0.373	0.139	0.139	-0.373	-0.747	-0.286
	Amount Read on Infant Caretaking	0.564	0.318	0.179	-0.360	-0.690	-0.462
	Infant Requiring Oxygen in Isolette	0.654	0.427	0.109	0.304	0.506	0.272
	Infant Requiring Mechanical Ventilation	0.678	0.459	0.032	0.219	0.731	0.421
	Infant Requiring Other Therapy	0.710	0.504	0.045	-0.160	-0.377	-0.306
	Self-rating of Knowledge of Infant Caretaking	0.738	0.530	0.026	-0.054	0.353	0.241
	Paternal Educational Level	0.743	0.551	0.021	-0.312	-0.298	-0.264
	CONSTANT					2.633	

[a]Only variables explaining at least 1.5% of the variance in the paternal attitude factor scores are presented.

TABLE XIV (Continued)

STEPWISE MULTIPLE REGRESSION: PATERNAL ATTITUDE FACTOR SCORES AND INTERVENING VARIABLES

Paternal Attitude Factor	Order of Intervening Variables Entering Stepwise Analysis[a]	Mult r	r square	r sq change	Simple r	B	Beta
V The Preterm Infant	Anticipation of Children Prior to this Pregnancy	0.517	0.268	0.268	0.517	0.495	0.492
	Planning of Pregnancy	0.612	0.375	0.107	-0.209	-0.732	-0.379
	Paternal Age	0.668	0.446	0.071	-0.320	-0.662	-0.367
	Infant Requiring Other Therapy	0.708	0.501	0.055	0.130	0.329	0.387
	Past Experience with Infant Caretaking	0.741	0.549	0.048	0.213	0.200	0.209
	Infant's Birthweight	0.770	0.592	0.043	0.157	0.296	0.298
	Paternal Educational Level	0.783	0.613	0.021	-0.157	-0.967	-0.123
	CONSTANT					-0.553	

[a]Only variables explaining at least 1.5% of the variance of the paternal attitude factor scores are presented.

53.8% of the variance in the factor scores related to Factor I. The first variable to enter the analysis concerned the infant receiving total oral feedings. It explained 26.8% of the variance. The variable referring to the father's anticipation, after the birth of the baby, of having more children, the next variable to enter the analysis, explained an additional 9.1% of the variance. The third variable to enter, paternal age, added a further 4.1%. The fourth variable related to the infant receiving oxygen therapy in an isolette, when added to the analysis, accounted for an additional 3.4% of the variance. The variables which had to do with the fathers' anticipation, prior to the infant's birth, of having children, and the planning of the pregnancy, the fifth and sixth variables which entered the stepwise analysis, explained an additional 2.7% and 3.4% respectively of the variance. The seventh variable to enter the analysis, the fathers' report of their own fathers' involvement in childrearing, accounted for 2.2% of the variance. The final variable which entered into the analysis, the type of delivery, explained an additional 2.1% of the variance.

Factor II: Paternal Relationships

There were eleven variables, each of which explained at least 1.5% of the variance in the factor scores related to Factor II and accounted for 77.8% of the total variance. The first variable to enter into the analysis, the infant being in a crib, accounted for 32.7% of the variance. An additional 14.7% of the variance was explained by the second variable that entered the analysis, the age of the father. The third variable to enter into the analysis,

additional therapy for the infant, explained 5.0% of the variance. The planning of the pregnancy and the type of delivery were the fourth and fifth variables which entered into the analysis, adding 5.9% and 3.4% respectively to the variance. The following variables which entered into the analysis, in the following order, explained the additional variance: the frequency of paternal visits to the nursery explained 4.7% of the variance, the educational level of the father explained 1.7% of the variance, the father's involvement in labor and delivery explained 2.4% of the variance, the experience of the father with child caretaking explained 3.0% of the variance, the preference of the father regarding the sex of his infant accounted for 2.6% of the variance, and the father's experience with infant caretaking explained 1.7% of the variance.

Factor III: Paternal Feelings of Engrossment

For Factor III, there were eight variables, each of which explained at least 1.5% of the variance in the fathers' factor scores and accounted for 50.2% of the total variance. The first variable which entered into the analysis, the father's understanding of his infant's condition, explained 14.0% of the variance. The second variable to enter into the analysis, the infant requiring mechanical ventilation, explained 12.5% of the variance. The remaining six variables which entered into the stepwise analysis in the following order accounted for the remaining variance: the infant being in a crib explained 7.7% of the variance, the father's rating of his knowledge of infant caretaking accounted for an additional 7.5% of the variance, the amount of paternal experience in infant

caretaking accounted for 1.3% of the variance, paternal educational level explained 1.8% of the variance, the father's involvement in labor and delivery explained 3.1% more of the variance, and the infant's gestational age accounted for 2.3% of the variance.

Factor IV: Parental Role Differentiation

For this factor, there were seven variables, each of which explained at least 1.5% of the variance in the factor scores related to parental role differentiation. Together, these variables explained 55.1% of the variance. Paternal age, the first variable which entered into the analysis, explained 13.9% of the variance. The next six variables which entered into the analysis in the following order accounted for the remaining variance: the amount read by the father on infant caretaking explained 17.9% of the variance, the infant receiving oxygen therapy in the isolette accounted for an additional 10.9% of the variance, the infant requiring mechanical ventilation explained 3.2% of the variance, additional therapy for the infant explained 4.5% of the variance, the father's experience with infant caretaking accounted for 2.6% of the variance, and the educational level of the father explained 2.1% of the variance.

Factor V: The Preterm Infant

There were seven variables, each of which explained at least 1.5% of the variance in the factor scores related to the preterm infant and accounted for 61.3% of the total variance. The first variable to enter into the analysis, paternal anticipation prior to this pregnancy of having children, explained 26.8% of the

variance. The planning of the pregnancy, the second variable to enter into the analysis, accounted for 10.7% of the variance. The third variable which entered into the analysis was paternal age which explained an additional 7.1% of the variance. The next four variables which entered into the analysis in the following order accounted for the remaining variance: infant requiring other therapy explained 5.5% of the variance, the experience of the father in infant caretaking explained 4.8% of the variance, the infant's birthweight explained an additional 4.3% of the variance, and the educational level of the father accounted for 2.1% of the variance.

Summary

Most of the fathers in the study had been raised by their natural parents with their mother or both parents as the main caretaking figures. Many of them did not possess knowledge of and experience with infant caretaking. However, most of them had anticipated having children prior to the present pregnancy.

The fathers' involvement during the childbearing period varied. However, by two weeks postpartum, most of the fathers were performing caretaking tasks for their infants and visiting frequently. It seemed to be important to the fathers to be supportive to their wives.

The high attitude scores of the fathers indicated that by two weeks postpartum the fathers were experiencing relative ease in the transition to the paternal role. Five factors were identified by factor analysis as the factors which were actually being measured by the attitude scale. Some of the antepartal, intrapartal, and

postpartal events experienced by the fathers in this study correlated with and were predictive of each of the five factors identified as underlying the paternal attitudes relevant to becoming a father of a premature infant.

CHAPTER V

DISCUSSION

At the outset of this study, paternal attitudes relevant to becoming a father of a hospitalized premature infant were thought to be reflective of paternal beliefs, feelings, behavioral intentions, and actions concerning the father-infant relationship; the husband-wife relationship; the infant; and the father's life-style and self-image, as a man and a father. However, factor analysis indicated that such paternal attitudes focused on the following factors: self-image as a father; paternal relationships; paternal feelings of engrossment; paternal role differentiation; and the preterm infant. It seems that the four original factors concerning paternal attitudes relevant to becoming a father of a hospitalized premature infant were incorporated into the five new factors.

The principal factor underlying paternal attitudes relevant to becoming a father of a hospitalized premature infant was found to be that of self-image as a father. A possible explanation for the primary position of this factor is that the men in this study experienced becoming a father at a time during pregnancy when most fathers are constructing their image of self as a father (Antle-May, 1982).

The occurrence of a premature birth did not appear to affect the self-image of the fathers in this study, in an adverse manner, as indicated by the fathers' denial of any feelings of failure after their infants' birth. The overall positive responses to the items

of this principal factor appear to support the finding of elation and increased self-esteem, self-worth, and self-importance among men experiencing fatherhood, reported in studies of fathers of full term infants (Bills, 1980; Cronenwett & Newark, 1974; Greenburg & Morris, 1974; Leonard, 1976). It seems that there may be a basic paternal tendency to find the paternal role stimulating and gratifying regardless of the circumstances surrounding the birth of the child.

A second factor, paternal relationships, revealed that the husband-wife relationship and the father-infant relationship were important aspects of the fathers' adaptation to the paternal role. As in the studies of fathers of full term infants (Barnhill & Rendina, 1979; Cowan et al., 1978; Cronenwett & Kunst-Wilson, 1981a; Wapner, 1976), it was found in this study that the fathers' conception of being a significant support figure for their wives during the childbearing period played an important role in the fathers' adjustment to the paternal role. It may be that both of the parents expect the father to display courage and to give support in a crisis situation, such as a delivery. It may also be the case that the vagueness surrounding paternal role enactment after a premature birth is overshadowed and lessened by the carrying out of the usual supportive and helpful aspect of the husband role.

Most of the fathers in this study felt emotionally closer to their wives after the birth of their infants. This may indicate that a couple's relationship can be positively affected by the birth of a premature infant. The feelings of strong emotional ties expressed by the fathers in this study toward their wives may have

been a result of their being able to be involved, with their wives, in the care of their babies, and to serve as a support figure for their wives. In addition, the wives may have served as a support figure for their husbands.

In this study, tactile contact with the infant played an important part in the adaptation of the fathers to the paternal role. It may be that communication between the newborn and the parent is established initially through the act of touching. The touching of the infant may confirm, for the father, the existence of a separate individual with whom a relationship can be established.

A third factor identified in this study as pertinent to paternal attitudes relevant to becoming a father of a hospitalized premature infant was paternal engrossment in the newborn. Paternal engrossment has been described as a father's sense of absorption, pre-occupation, and interest in his newborn infant (Greenburg & Morris, 1974). The engrossment demonstrated by the fathers in this study suggests that engrossment may be a basic natural potential that exists in all fathers. As suggested by Greenberg and Morris (1974), paternal feelings may be elicited in fathers merely by the presence of their infants. Although feelings of engrossment were expressed by the fathers in this study at two weeks postpartum, it is unknown when these feelings initially occurred. However, the fathers expressed having positive feelings toward their infants by the second and third day postpartum.

The opportunity for equal involvement with the spouse in infant caretaking played an important part in the fourth

factor, paternal role differentiation. The attitudes of the fathers in this study seem to indicate that, to the fathers, their role as a father in terms of infant caretaking was just as important as their wives' role as a mother in infant caretaking. It is possible that the fathers in this study possessed a high commitment to the paternal role and had ample opportunities by two weeks postpartum to engage in activities they had expected to be enacting on becoming fathers. In addition, the importance that the fathers placed on their new role may be indicative of the fact that they were in the stage of transition to parenthood defined by Rossi (1969) as "the honeymoon phase".

The fathers in this study seemed to have more opportunities than fathers of full term infants, observed in other studies, (Leonard, 1976; Parke, 1979) for equal involvement with their wives in infant caretaking. They indicated that they were involved in infant caretaking tasks and were visiting their hospitalized infants frequently. These findings appear to support Minde's (1981) finding that an unfamiliar environment such as an intensive care nursery promotes the carrying out of maternal and paternal secondary caretaking roles which are similar and characterized by opportunities for equal involvement in caretaking. However, the carrying out of similar maternal and paternal behaviors in terms of infant caretaking has been observed among parents of full term infants in the early postpartal period (Boyd, 1980; Cronenwett & Kunst-Wilson, 1981b). This finding may indicate that the regular newborn nursery can also be an unfamiliar setting to parents. The observed similarities in

paternal and maternal caretaking acts during the early postpartal period may also be due to the fact that the limited behavior repetoire of newborns curtails the range of interactive behaviors which are possible. The behaviors of the newborn infant may affect both parents similarly.

The final factor, the preterm infant, which was found to underlie paternal attitudes relevant to becoming a father, was an unexpected finding. The items which loaded on this factor were expected to load on the factors labelled "paternal engrossment" and "paternal role differentiation". The appearance of this last factor may be indicative of the fact that the fathers in this study were uniquely different from those of full term infants, since their infants were born prematurely and were hospitalized.

The fathers' judgement that their infants were no longer ill and their expressed positive attitudes toward their infants' condition suggest that the health of the infant positively influences paternal attitudes relevant to becoming a father. In other studies, the health of the infant has been found to be positively associated with adjustment to the paternal role (Fein, 1976b; Russell, 1974; Tonti, 1979). As an infant's condition becomes less critical, a father may begin to believe that his infant will survive and, thus, become more involved with him/her.

The acknowledgement and acceptance of the premature infant as an unique individual has been described as a psychological task that parents of a premature infant must accomplish in the postpartal

period (Kaplan & Mason, 1969). Most of the fathers in the study indicated that their infants were unique and that they would not change anything about them. It seems that, by two weeks postpartum, the fathers were attempting to accomplish this developmental task. In addition, it seems reasonable to conclude that the fathers' positive perception of their infants might have been a reflection of their denial of the actual situation, that is, the premature birth of their infant and the resulting consequences.

Many variables studied in this project were found to correlate significantly with each of the factors identified as underlying paternal attitudes relevant to becoming a father of a hospitalized premature infant. However, in the analysis of the stepwise regression, very few strong predictors of the five factors were revealed. One variable, opportunities to feed the hospitalized premature infant, was found to be predictive of and positively related to the factor, self-image as a father. The carrying out of a caretaking act, such as feeding the infant, might have been a paternal role expectation the fathers in this study held for themselves.

The results of this study indicate that paternal self-image as a father in the early postpartal period was also enhanced by the fathers' anticipation of being a father, their planning of the pregnancy, and their having had a paternal role model who advocated active paternal involvement in childbearing and child-

rearing. These findings appear to be consistent with the literature on role theory (Thornton & Nardi, 1979) which suggests that the opportunity to enact a new role which fits with past experiences, expectations, and future goals enables a person to incorporate the role into the self-image.

A premature delivery interrupts paternal role preparation and, as a result, fathers of premature infants may not be as ready as fathers of full term infants to take on the paternal role post-partally. In this study, the fathers who seemed to be incorporating the paternal role into their self-image were those whose infants were more mature at birth as judged by their gestational age. Prenatal preparation for fatherhood may not have been completed by those fathers whose infants were less gestationally mature at the time of their birth.

A variable which was a major predictor of and positively related to the factor, paternal relationships, was the availability of the infant to the father for caretaking and social interactions. The fathers in this study participated in caretaking and social activities with their infants which were similar to those reported in the case of fathers of full term infants (Boyd, 1980; MacDonald, 1979; Parke & Sawin, 1979; Peterson et al., 1979). Specifically, the quantity of paternal interactions with the infant was found to be less when the infants required more intensive medical care as compared to when they required less intensive medical care. The fathers whose infants required therapy, such as oxygen therapy, phototherapy, and chest tube therapy, may have had

their opportunities to be involved in caretaking and social activities with their infants curtailed by such treatments. In addition, these fathers may have been reluctant to interact with their infants because they were fearful that their infants were sick and might not survive. Also, they may have chosen not to interact with their infants to the same degree as the fathers whose babies were not as ill because their infants did not meet their expectations. Furthermore, they may have been unsure about how to interact with their infants. Such fathers may focus more on the supportive aspect of the husband role than on the paternal role.

The infant's improved clinical status which resulted in his/her placement in a crib was found to be predictive of and negatively related to the factor, paternal relationships. A possible explanation for the negative relationship in terms of the husband-wife relationship is that the fathers perceived the provision of emotional support to their wives to be not as demanding when their infants were placed in a crib and their medical condition was no longer critical as compared to when their infants were in isolettes and their medical condition was critical. However, the fathers may still have perceived their infants in the open cribs to be sick and, thus, may not have been ready to increase their interactions with their infants, accounting for the negative relationship found in terms of the father-infant relationship.

Other correlations found to be predictive of the factor, paternal relationships, were the planning of the pregnancy and paternal involvement in labor and delivery. Involvement in the

planning of a pregnancy may enhance a father's feeling of being part of a new family unit. Cronenwett and Newark (1974) suggest that paternal involvement in the delivery of the infant positively influences a couple's relationship through the sharing of the experience of their infant's birth.

In this study, the variables, early paternal contact with the infant and prenatal experiences of the fathers, were found to be positively related to the factor, paternal engrossment in the hospitalized infant. It has been documented in previous studies that early paternal contact with the newborn infant plays an important role in the development of a paternal-infant relationship (Boyd, 1980; Greenburg & Morris, 1974; Klaus & Kennell, 1975, 1982). Greenburg and Morris (1974) suggest that early contact with the infant releases the potential for paternal engrossment in the infant during the early postpartal period. Paternal prenatal experiences such as previous experience with and reading about infant caretaking may help fathers to be at ease as they participate in their infants' caretaking. As a result, they may become more engrossed in their infants than fathers who have not had such prenatal experiences.

It was interesting to note that, in this study the variable, the father's involvement in labor and delivery, was found to be negatively related to the factor, paternal engrossment in the infant. This may indicate that paternal involvement in a high risk delivery may have an adverse effect on the development of paternal feelings of engrossment.

The variable, paternal understanding of the infant's

medical condition, was found to be predictive of and positively correlated with the factor, paternal engrossment in the infant. It seems that the occurrence of positive paternal-infant interactions in terms of engrossment may be related to what the father learns about his infant's unique characteristics, needs, and condition. This hypothesis seems to be in line with the belief expressed by several investigators (Bills, 1980; Gay, 1979) that an acquaintance period is necessary for the formation of an affectionate bond between a father and his newborn baby. The acquisition of information about the infant and the development of an accurate perception of the infant are tasks of the acquaintance period that occur after an infant's birth.

In this study, the variable, frequency of paternal visits to the nursery to see the infant, was found to be positively associated with the factor, paternal engrossment. When fathers visit their infants frequently in the nursery, they have numerous opportunities to get to know their infants and, thus, to accomplish the tasks of the acquaintance period. Frequent paternal interactions with the infant whose condition is improving may elicit in the father, a sense of relief concerning the condition of his infant. This sense of relief may develop over time as the father, by his frequent visits to his infant, begins to realize that his infant is likely to survive. Also, the neonate's improved clinical status may be accompanied by improved responsiveness which may be perceived by the father as a response to him, thereby enhancing his feelings of engrossment. Thus, the frequency of contact with the infant, the

sense of relief felt by the father, and the improved clinical status of the infant, may be more influential in the development of paternal-infant attachment than the time of initial paternal contact with an infant.

Premature infants often behave in a manner which parents find difficult to interpret (Brazelton et al., 1979). This difficulty may explain why the variables, birthweight and gestational age, were found to be predictive of and negatively correlated with the factor, paternal engrossment. It may be that, as premature infants become more mature and behave in a manner similar to that of full term infants and understandable to the parents, paternal engrossment is enhanced.

In this study, a negative correlation was found between the factor, paternal role differentiation, and the variable, the infant's medical condition. One possible explanation for this finding is that, as opportunities for parenting increased with the infants' recovery, the fathers held more traditional views regarding parenting than when there were less opportunities available for parenting. In addition, when opportunities for both parents to be involved in caretaking activities increased with the infant's recovery, the enactment of the maternal role might have been encouraged by the husband and nursing staff. There might not have been the same degree of encouragement and support given toward paternal role enactment. There might have been a lack of role models or adequate support systems in the neonatal intensive care nursery to enhance paternal role enactment. The fathers might have received little guidance with regard to the type of infant caretaking tasks

in which they could continue to be involved. Also, when parenting opportunities increased, the fathers might have considered their role responsibility of supporting the mother-infant interaction in terms of infant caretaking to be of primary importance.

In this study, the variable, paternal knowledge of and past experiences with infant caretaking, was found to be negatively related to the factor, paternal role differentiation. It may be that any previous preparation for childrearing does not prepare fathers adequately for the experiences they encounter on becoming a father of a hospitalized premature infant. As a result, they may feel uncomfortable in their new role and assume, in relation to their wives, a secondary position in terms of their infants' caretaking.

Advanced paternal age was a variable found to be predictive of and negatively correlated with the factors, self-image as a father, paternal relationships, paternal role differentiation, and the preterm infant. It seems that advanced paternal age is associated with difficulty in dealing with the changes in life style and relationships within the family which occur with the birth of a child. The older father may hold more traditional views of the paternal role than the younger father. The older father may, thus, find it difficult to perform his role if others expect him to carry out non-traditional parenting acts. Also, the older father may not perceive his role as a parent to be as important as his other roles. This father may be more career oriented than the younger father and, thus, less committed to infant caretaking and adapting to his

paternal role. The older father may have developed a life-style that is entrenched in rituals and patterns that are not conducive to the taking on of the paternal role. In addition, it was found that the older father in this study tended to have had a longer standing relationship with his spouse than the younger father. It, thus, may have been more difficult for the older man to adjust to the introduction of a new family member.

Summary

A descriptive study was conducted to examine the attitudes of first time fathers on becoming parents of hospitalized premature infants. Factor analysis revealed that the factors underlying the attitudes being measured included: self-image as a father, paternal relationships within the family, paternal feelings of engrossment, paternal role differentiation, and the preterm infant. The variables which were found to correlate with and to be predictive of paternal attitudes concerning these factors included those which had to do with prenatal, intrapartal, and postpartal events. The high attitude scores of the fathers in this study suggest that the fathers were experiencing their transition to the paternal role with ease by two weeks postpartum.

CHAPTER VI

CONCLUSIONS, LIMITATIONS, AND NURSING IMPLICATIONS

This chapter contains the conclusions and the limitations of the study. Implications of the study results for nursing practice and research are presented.

Conclusions

The purpose of this study was to increase present knowledge and understanding about first-time fathers of hospitalized premature infants and early paternal role development. The study focused on the identification of that which reflects the attitudes, that is, the common beliefs, feelings, behavioral intentions, and actions of fathers at two weeks postpartum with regard to becoming parents of hospitalized premature infants. Psychological and demographic variables considered by authors in the literature and by the investigator to influence early paternal attitudes were studied. The following conclusions are based on the results obtained for this specific group of fathers and in view of the limitations of the study.

By two weeks postpartum, the fathers in this study were defining a meaningful role for themselves as fathers. They perceived themselves to be important figures within the family unit in terms of infant caretaking and displayed feelings of engrossment in their infants. Although the sample was small in size and self selected, the fathers' positive responses toward their transition to the paternal role suggest that there is a basic paternal tendency to

find the paternal role gratifying in spite of the particular circumstances of the childbearing experience.

The results of this study suggest that prenatal preparation for the paternal role and development of a coherent paternal role are important requirements for ease in transition to fatherhood. However, it seems that continued support by nursing staff for paternal role enactment during the early postpartal period may be more important when the childbearing experience is not as expected.

A final note concerning these results is that the paternal attitudes identified in this study are not to be considered predictive of the fathers' future fathering behaviors. Subsequent fathering behaviors should not be based solely upon early paternal attitudes to becoming a father. In addition to attitudes, social norms, personal values, situational factors, and motivation are influential in determining future paternal parenting behaviors. In this study only the fathers' attitudes relevant to becoming a father at two weeks postpartum and the possible intervening variables were studied.

Limitations

The fathers of this study are not representative of any other group of first-time fathers of hospitalized premature infants as a non-random sampling technique was used. Thus, the findings of this study are not generalizable to any other group of fathers.

The nature of the research instruments and their administration was another limitation of this study. The measurement of

the paternal attitudes and the psychosocial and demographic variables relied solely on self reports. A primary difficulty of self report measures is that a person may attempt to present himself/herself in a socially desirable manner to please the researchers by his/her responses (Cook & Sellitz, 1964). The absence of the investigator during the completion of the questionnaire could have been disadvantageous, since there was no opportunity to clarify questions or statements. Although the subjects had been instructed, by written and verbal directions, to complete the questionnaire independently, and not to alter their answers after discussion with their spouses, no controls were implemented to ensure that this occurred. Finally, a tool with closed questions may limit the respondent in that he/she cannot elaborate on his/her response to any item. A greater understanding of the paternal attitudes relevant to becoming a father of a hospitalized premature infant may be achieved with a combination of self report measures using open-ended questions and semi-structured interviews.

Further limitations were that only the establishment of the face and content validity of the questionnaire was attempted. Establishment of the reliability of the questionnaire was limited to the measurement of its internal consistency. The result of this measurement indicated that further reliability testing is required. The instrument may have had an insufficient number of items or some of the items may not have been measuring paternal attitudes relevant to becoming a father.

The research design was another limitation of the study.

Data were collected at only one point in time during the postpartal period. As the transition to the paternal role is a process which occurs during the childbearing and childrearing periods, data must be collected at various times during these periods.

Nursing Implications

The following implications for nursing practice and research are made on the basis of the results of the study.

Most of the fathers in this study indicated that they had had little experience with or knowledge of infant caretaking, prior to their infants' birth. However, as judged by the paternal attitudes, such experience and knowledge may benefit fathers in terms of their transition to fatherhood. An implication for nursing practice of this finding is that perhaps parent education courses offered by nurses should provide opportunities for expectant fathers to acquire infant caretaking skills and knowledge and to develop realistic expectations for themselves concerning fatherhood.

It seems that an implication for nursing practice of the finding that father-infant caretaking interaction was positively associated with paternal feelings of engrossment in the infant, development of a coherent paternal role, and enhancement of paternal self-image as a father, is that, in parent education programs offered prenatally and postnatally, the viewpoint that infant caretaking activities are important worthwhile activities for fathers to undertake might be presented.

Based on the finding that paternal understanding of the infant's clinical condition is predictive of paternal engrossment in the infant and is positively related to the development of paternal relationships within the family, it seems appropriate to suggest that the neonatal nurse ensure that the new father is informed about the unique characteristics, capabilities, condition, and needs of his infant in the early postpartal period. The finding that the opportunity to partake in the feeding of the infant positively influences paternal attitudes on becoming a father seems to imply that neonatal nurses ought to provide the father of a preterm infant with opportunities to feed his infant once oral feedings have been established.

Implications for nursing research are evident with regard to the finding that paternal infant caretaking experience and knowledge negatively influence paternal attitudes on becoming a father in terms of paternal role differentiation. It may be that the usual prenatal preparation for parenthood does not adequately prepare the father for developing a coherent role for himself when the childbearing experience does not occur as anticipated. Research is recommended to further study this aspect of paternal role differentiation and to identify strategies that can be utilized prenatally by health professionals to influence a man's perception of his paternal role in case there is an adverse outcome of the pregnancy, such as prematurity.

The puzzling finding that paternal attendance during labor and delivery was beneficial in terms of the fathers' self-image as a father and paternal relationships within the family, but not so

with regard to paternal engrossment in the infant requires study. In addition, given that the fathers, who were not present at the delivery of their infants due to a caesarean section, tended to show greater feelings of engrossment in their infants than the fathers, who were present at the delivery of their infant, further nursing research is recommended to examine the benefits and possible ill effects of paternal attendance at the delivery of a high-risk infant.

It seems that further study is required with regard to the finding that an older father's attitudes relevant to becoming a father reflected dis-ease in the transition to the paternal role. It is recommended that research be conducted to determine if there is a difference between younger and older first-time fathers in terms of ease in transition to fatherhood and what factors may account for this difference. The nurse who is aware of differences, associated with age, in a father's adaptation to fatherhood, may improve her ability to assist the older first-time father.

There are several nursing implications which flow from the finding that the fathers perceived their caretaking role to be as important as that of the mother when their infants were critically ill but as less important when their infants' condition improved. There may be a need for the neonatal nurse to provide fathers with the support and encouragement they require to continue to enact their role as their premature infants' condition improves. In addition, further research is recommended to examine the change noticed in the fathers' thinking regarding their paternal role enactment as the infants' condition improved and the factors which contribute to it.

The following implications for nursing research and nursing practice are based on the fact that the feeding of the hospitalized premature infant was a caretaking activity which was found to be positively related to the father's self-image as a father. Perhaps the neonatal nurse ought to encourage fathers to perform such activities. Further research with fathers of premature infants may disclose other caretaking activities which would be beneficial for the father to perform in terms of enhancing his self-image as a parent.

It is recommended that a study be conducted with a similar group of fathers in which data are collected through interviews and the use of open-ended questions. In this way, additional data concerning the fathers' attitudes relevant to becoming a father of a hospitalized premature infant may be obtained. In addition, another study is recommended in which the father-infant interactions in the postpartal period are observed and self reports are obtained. Relationships between these two measures may be examined to determine if there is a correlation between paternal role enactment and paternal attitudes relevant to the role.

It is recommended that comparison studies be conducted with larger samples of fathers and of fathers with infants in various states of health, that is, infants with congenital anomalies and infants who require surgical interventions, are critically ill, are of multiple birth, or are delivered at term. Such research would help increase our knowledge and understanding of paternal role development in the early postpartal period.

It is recommended that studies be undertaken which examine how the mother and father differ in their parenting behaviors and how they influence each other's parenting roles after the birth of a premature infant. Finally, longitudinal studies of first-time fathers of premature infants during the childrearing period are recommended. Data could be collected immediately after delivery of the infant, prior to and at the discharge of the infant from the hospital, and at home after discharge from the hospital. A more complete description of the fathers' early adaptation to the paternal role may thus be obtained.

Summary

In this study, paternal attitudes relevant to becoming a father of a hospitalized premature infant were identified and described. The psychosocial and demographic variables which were associated with the paternal attitudes relevant to becoming a father of a hospitalized premature infant were also identified and described. The study is limited by its sampling technique, measurement tool, and method of data collection. Inferences cannot be made to any other group of first-time fathers of hospitalized premature infants. However, as a group, the fathers in this study seemed to be experiencing, by two weeks postpartum, relative ease in their transition to their paternal role as reflected by their high attitudinal scores.

REFERENCES

Anastasi, A. (1954). Psychological testing. New York: MacMillan.

Anthony, E.J., & Benedek, T. (Eds.). (1970). Parenthood: Its psychology and psychopathology. Boston: Little, Brown, & Co.

Antle-May, K. (1975). Psychological involvement in pregnancy by expectant fathers. Journal of Obstetrical-Gynecological and Neonatal Nursing, 4(2), 40-42.

Antle-May, K. (1978). Active involvement of expectant fathers in pregnancy: Some further considerations. Journal of Obstetrical-Gynecological and Neonatal Nursing, 7(2), 7-12.

Antle-May, K. (1980). A typology of detachment involvement styles adopted during pregnancy by first time fathers. Western Journal of Nursing Research, 2(2), 445-453.

Antle-May, K. (1982). Three phases of father involvement in pregnancy. Nursing Research, 31(6), 337-342.

Barnhill, L., Rubenstein, G., & Rocklin, N. (1979). From generation to generation: Fathers-to-be in transition. The Family Coordinator, 28, 229-234.

Benfield, D.G., Leib, S., & Reuter, J. (1976). Grief responses of parents after referral of the critically ill newborn to a regional centre. New England Journal of Medicine, 294, 975-978.

Bigner, J.J. (1977). Attitudes towards fathering and father-child activity. Home Economics Research Journal, 6(2), 96-106.

Bills, B.J. (1980). Enhancement of paternal-newborn affectionate bonds. Journal of Nurse-Midwifery, 25(5), 21-26.

Bohrnstedt, G.W. (1970). Reliability and validity assessment in attitudes measurement. In G.F. Summers (Ed.), Attitude measurement (pp. 80-89). Chicago: Rand McNally & Co.

Boyd, S.T. (1980). Paternal involvement in the interactive behavioral assessment process. Unpublished doctoral dissertation, Texas Women's University, Denton, Texas.

Briggs, E. (1979). Transition to parenthood. Maternal-Child Nursing Journal, 8(2), 69-83.

Burr, W.R. (1972). Role transitions: A reformulation of theory. Journal of Marriage and Family, 34, 407-416.

Caplan, G. (1960). Patterns of parental responses to the crisis of premature birth. Psychiatry, 23, 365-374.

Coleman, A., & Coleman, L. (1971). Pregnancy: The psychological experience. New York: Herder & Herder.

Coley, S.B., & James, B.E. (1976). Delivery: A trauma for fathers? The Family Coordinator, 25, 359-365.

Cook, S., & Sellitz, C. (1970). A multiple-indicator approach to attitude measurement. In G.F. Summers (Ed.), Attitude measurement (pp. 23-41). Chicago: Rand McNally & Co.

Cowan, C.P., Cowan, P.A., Coie, L., & Coie, J. (1978). Becoming a father: The impact of a first child's birth on the couple's relationship. In W.B. Muller and L.F. Newman (Eds.), The first child and family formation (pp. 296-323). Chapel Hill: Carolina Population Centre, University of North Carolina.

Cranley, M. (1975). When a high risk infant is born. American Journal of Nursing, 75(10), 1696-1699.

Cranley, M., & Weaver, R.H. (1983). An exploration of paternal-fetal attachment behavior. Nursing Research, 32(2), 68-72.

Cronbach, L.J. (1951). Coefficient alpha and the internal structure of tests. In W.A. Mehrens & R.L. Ebel (Eds.), Principles of education and psychological measurement: A book of readings (pp. 132-167). Chicago: Rand McNally & Co.

Cronbach, L.J. (1970). Essentials of psychological testing (3rd ed.). New York: Harper & Row.

Cronenwett, L.R. (1982). Father participation in child care: A critical review. Research in Nursing and Health, 3, 63-72.

Cronenwett, L.R., & Kunst-Wilson, W. (1981a). Stress, social support and the transition to fatherhood. Nursing Research, 30(4), 196-201.

Cronenwett, L.R., & Kunst-Wilson, W. (1981b). Nursing care of the emerging family - promoting paternal behavior. Nursing Research and Health, 4, 201-211.

Cronenwett, L.R., & Newark, L.L. (1974). Fathers' responses to childbirth. Nursing Research, 23(3), 210-217.

Diers, D. (1979). Research in nursing practice. New York: J.P. Lippincott.

Dyer, E.D. (1963). Parenthood as crisis: A restudy. Marriage and Family Living, 25, 196-201.

Earls, F. (1976). The fathers (not the mothers): Their importance and influence with infants and young children. Psychiatry, 39, 209-225.

Ebel, R.L. (1966). Obtaining and reporting evidence on content validity. In C.I. Chase & H.G. Ludlow (Eds.), Readings in educational and psychological measurement (pp. 92-102). Boston: Houghton Mifflin.

Eversoll, D. (1979). Two generational view of fathering. The Family Coordinator, 28, 503-507.

Fein, R.A. (1976a). The first weeks of fathering: The importance of choices and supports for new parents. Birth and the Family Journal, 3(2), 53-57.

Fein, R.A. (1976b). Men's entrance to parenthood. The Family Coordinator, 25, 341-348.

Fein, R.A. (1978). Considerations of men's experience and the birth of a first child. In W.B. Miller & L.F. Newman (Eds.), The first child and family formation (pp. 327-339). Chapel Hill: Carolina Population Centre, University of North Carolina.

Fishbein, M., & Ajzen, T. (1975). Belief, attitude, intention and behavior. Reading, Mass.: Addison Wesley.

Gay, J.T. (1979). Behaviors of first time fathers at the time of their initial acquaintance with their infant. Unpublished doctoral dissertation, University of Alabama, Birmingham, Alabama.

Gladieux, J.D. (1978). Pregnancy - The transition to parenthood: Satisfaction with the pregnancy experience is a function of sex role conceptions, marital relationship and social network. In W.B. Miller & L.F. Newman (Eds.), The first child and family formation (pp. 275-295). Chapel Hill: Carolina Population Centre, University of North Carolina.

Gollaber, M. (1976). A comment on the need for father-infant post-partal interaction. Journal of Obstetrical, Gynecological and Neonatal Nursing, 5(5), 17-20.

Greenberg, M., & Morris, H. (1974). Engrossment: The newborn's impact upon the father. American Journal of Orthopsychiatry, 44, 520-531.

Hangsleben, K.L. (1983). Transition to fatherhood: An exploratory study. Journal of Obstetrical, Gynecological and Neonatal Nursing, 12(4), 265-270.

Hines, J.D. (1971). Father - the forgotten man. Nursing Forum, 10(2), 177-199.

Hobbs, D.F. (1965). Parenthood as a crisis: A third study. Journal of Marriage and the Family, 27, 367-372.

Hott, J. (1976). The crisis of expectant fatherhood. American Journal of Nursing, 76(9), 1436-1440.

Hott, J. (1980). Best laid plans: Pre and post partum comparison of self and spouse in primiparous Lamaze couples who share delivery and those who do not. Nursing Research, 29(1), 20-27.

Hrobsky, D.M. (1977). Transition to parenthood: A balancing of needs. Nursing Clinics of North America, 12(3), 457-468.

Jacoby, A.P. (1969). Transition to parenthood: A reassessment. Journal of Marriage and the Family, 31, 720-727.

Johnson, S.H. (1979). High risk parenting. Philadelphia: J.B. Lippincott.

Jones, C. (1981). Father to infant attachment. Research in Nursing and Health, 4, 193-200.

Kaplan, D.M., & Mason, E.A. (1965). Maternal reactions to premature birth viewed as an acute emotional disorder. In J. Parad (Ed.), Crisis intervention: Selected readings (pp. 118-128). New York: Family Services Association of America.

Kennell, J. (1978). Parenting in the intensive care unit. Birth and the Family Journal, 5(4), 223-226.

Kerlinger, F.N. (1973). Foundations of behavioral research (2nd ed.). New York: Holt, Rinehart & Winston.

Kierman, B., & Scoloveno, M.A. (1977). Fathering. Nursing Clinics of North America, 12(3), 481-489.

Klaus, M., & Kennell, J. (1982). Parent-infant bonding (2nd ed.). Toronto: C.V. Mosby.

Lamb, M.E., & Lamb, J. (1976). The nature and importance of the father-infant relationship. The Family Coordinator, 25, 379-383.

Leonard, S.W. (1976). How first time fathers feel towards their infants. American Journal of Maternal Child Nursing, 1, 362-365.

Leonard, S.W. (1978). Transition to fatherhood. Issues in Comprehensive Pediatric Nursing, 2, 8-21.

Liedenberg, B. (1969). Expectant fathers. Child and Family Journal, 8, 264-277.

Limbardo, P.G., Ebbesen, E.B., & Maslach, C. (1977). Influencing attitudes and changing behavior (2nd ed.). Reading, Mass.: Addison-Wesley.

Manion, J. (1977). A study of fathers and infant caretaking. Birth and the Family Journal, 1(4), 174-178.

Marquat, R. (1976). Expectant fathers: What are their needs? The American Journal of Maternal Child Nursing, 1, 32-36.

McDonald, D.L. (1978). Paternal behavior at first contact with the newborn in a birth environment without intrusions. Birth and Family Journal, 15(3), 121-132.

Mehrens, W.A. (1978). Measurement and evaluation in education and psychology (2nd ed.). New York: Holt, Rinehart & Winston.

Mercer, R.T. (1981). A theoretical framework for studying factors that impact on the maternal role. Nursing Research, 30(2), 73-77.

Minde, K., Marton, P., & Perrotta, M. (1981). The role of the father for the infant at risk. American Journal of Orthopsychiatry, 51(4), 672-678.

Mosier, C.T. (1966). A critical examination of the concepts of face validity. In C.I. Chase & H.G. Ludlow (Eds.), Readings in educational and psychological measurements (pp. 103-113). Boston: Houghton Mifflin.

Murphy, N.J. (1973). Helping a family and their premature infant grow together. Canadian Nurse, 69, 42-45.

Nash, J. (1965). The father in contemporary culture and current psychological literature. Child Development, 36, 261-297.

Opirhory, G.J. (1979). Counseling the parents of a critically ill newborn. Journal of Obstetrical, Gynecological and Neonatal Nursing, 8(3), 179-182.

Oppenheim, A.N. (1966). Questionnaire design and attitude measurement. New York: Basic Books.

Parke, R.D. (1978). The father's role in infancy - A re-evaluation. Birth and the Family Journal, 5(4), 211-213.

Parke, R.D. (1979). Perspectives in father-infant interaction. In J. Osofsky (Ed.), Handbook of infant development (pp. 549-591). New York: John Wiley & Sons.

Parke, R.D. (1981). Fathers. Cambridge: Harvard University Press.

Parke, R.D., Power, T., Tinsley, B., & Hymel, S. (1979). The father's role in the family system. Seminars in Perinatology, 3(1), 25-33.

Parke, R.D., Power, T., Tinsley, B., & Hymel, S. (1980). A hospital based model of intervention. In D.B. Sawin, R.C. Hawkins, L.O. Walker, & J.H. Penticuff (Eds.), Exceptional infant (pp. 174-189). New York: Brunner/Mazel.

Parke, R.D., & Sawin, D.B. (1976). The father's role in infancy: A re-evaluation. The Family Coordinator, 25, 365-371.

Parke, R.D., & Sawin, D.B. (1979). Fathers' affectionate stimulation and caregiving behaviors with newborn infants. The Family Coordinator, 28, 509-513.

Pederson, F.A. (1980). The father-infant relationship. Observational studies in the family setting. New York: Praeger.

Peterson, G., Mehl, L., & Leiderman, H. (1979). The role of some birth related variables in father attachment. American Journal of Orthopsychiatry, 49(3), 330-339.

Philips, C.R. (1978). Fathering: Participation in labor and birth. Saint Louis: C.V. Mosby.

Rendina, T., & Dickenscheid, J.D. (1976). Father-involvement with first born infants. The Family Coordinator, 25, 373-377.

Robinschon, P., & Scott, D. (1969). Role theory and its application in family nursing. Nursing Outlook, 17, 52-57.

Roehner, J. (1976). Fatherhood: In pregnancy and birth. Journal of Nurse Midwifery, 21(1), 13-18.

Rokeach, M. (1968). Beliefs, attitudes, and values. San Francisco: Jossey-Bass.

Rossi, A.S. (1968). Transition to parenthood. Journal of Marriage and Family, 30, 26-39.

Rubin, R. (1967a). Attainment of the maternal role. Part I: Processes. Nursing Research, 16(3), 237-341.

Rubin, R. (1967b). Attainment of the maternal role. Part II: Models and referrants. Nursing Research, 16(3), 342-346.

Russell, C.S. (1974). Transition to parenthood: Problems and gratification. Journal of Marriage and the Family, 36, 294-301.

Taubenheim, A.M. (1981). Paternal-infant bonding in the first time father. Journal of Obstetrical, Gynecological and Neonatal Nursing, 10(4), 261-265.

Thorndike, R.L., & Hagen, E. (1961). Measurement and evaluation in psychology and education (2nd ed.). New York: John Wiley & Sons.

Thornton, R., & Nardi, P.M. (1975). The dynamics of role acquisition. American Journal of Sociology, 80, 870-885.

Toney, L. (1983). The effects of holding the newborn at delivery on paternal bonding. Nursing Research, 32(1), 16-19.

Tonti, M. (1979). Transition to fatherhood. Tasks, stresses and supports. Unpublished doctoral dissertation, Columbia University, Ann Arbor, Michigan.

Walker, L.O. (1980). Early parental attitude and the parent-infant relationship. In D.B. Sawin, R.C. Hawkins, L.O. Walker, & J.H. Penticuff (Eds.), Exceptional infant: Vol. 4. Psychosocial risks in infant environment transactions (pp. 234-251). New York: Brunner/Mazel.

Wapner, J. (1976). The attitudes, feelings and behaviors of expectant fathers attending Lamaze classes. Birth and the Family Journal, 3(1), 5-13.

Wente, A.S., & Crockenberg, S.B. (1976). Transition to fatherhood: Lamaze preparation adjustment difficulty in the husband-wife relationship. The Family Coordinator, 25, 351-356.

Williamson, Y. (1981). Research methodology and its application to nursing. New York: John Wiley & Sons.

APPENDIX I

RESEARCH QUESTIONNAIRE: PART I

INSTRUCTIONS:

Please check your responses or fill in the blanks as appropriate. Your responses will remain completely anonymous.

The following questions (#1 to 8) relate primarily to your first sixteen years of life.

1. Were you:

____ an only child ____ a middle child

____ the oldest child ____ the youngest child

If you were not the only child:

How many siblings were you raised with? ____

How many other children were you raised with? ____

2. Were you raised in:

____ your own family

____ a family other than your own

____ other (please specify) _____

3. If you were not raised by both your natural/adopted parents, please indicate the possible reason:

____ parents were separated/divorced

____ one or both parents died

____ other (please specify) _____

4. When you think back, who in your family was(were) most important for your caretaking and development as a child?

____ both your parents ____ grandparents

____ your mother ____ other (please specify)

____ your father _____

5. In what type of area did you spend the majority of your childhood years?

___ rural ___ urban

6. Was your mother employed outside of your home?

___ yes ___ no ___ not applicable

If yes, was she employed:

___ full time

___ part time ___ both, at different times

7. Was your father employed outside of your home?

___ yes ___ no ___ not applicable

If yes, was he employed:

___ full time

___ part time ___ both, at different times

8. In general, what degree of participation/responsibility do you feel that your father took in raising you?

___ There was little participation on his part.

___ He participated fairly actively in childrearing.

___ He shared the responsibilities of childrearing about equally with my mother.

___ He held most of the responsibilities of childrearing himself.

The following questions (#9 to 12) refer to your experience with young children and your knowledge of infant care.

9. In your opinion, how much experience have you had in taking care of and/or handling a newborn infant?

___ considerable ___ some ___ minimal ___ none

10. In your opinion, how much experience have you had in taking care of young children, such as babysitting or caring for younger brothers and sisters?

____ considerable ____ some ____ minimal ____ none

11. How much have you read regarding baby/child care?

____ considerable ____ some ____ minimal ____ none

12. How would you rate your knowledge of infant care?

____ very good ____ good ____ fair ____ poor ____ very poor

The following questions (#13 to 26) refer to your experiences with this pregnancy, your infant's birth, and the period since your baby's birth.

13. Before this pregnancy, how many children did you anticipate having?

____ none
____ 1-2
____ 3-4
____ more than 4
____ undecided

14. Now that your baby has arrived, how many more children do you plan to have?

____ none
____ 1-2
____ 3-4
____ more than 4
____ undecided

15. When you first found out that you were going to be a father, what kind of emotional reactions or feelings did you have? _____

_____

_____

16. Before the baby was born, did you want to have a:

____ boy ____ girl ____ it made no difference

17. From your perspective, was this pregnancy:

____ planned ____ unplanned

18. Did you attend prenatal classes?

____ yes ____ no

If yes, how many did you attend? ____

19. Did your wife have any medical problems during her pregnancy requiring medical attention?

____ yes ____ no

If yes, please explain briefly. _____

_____

20. Were you present at:

____ labor only ____ labor and delivery

____ delivery only ____ none of these times

If you were present at the delivery, did you see your baby being born? ____ yes ____ no

If you were not present at the delivery, when did you see your baby for the first time? _____

21. On your first visit to the neonatal intensive care nursery, did you go:

____ by yourself ____ with another family member

____ with your wife ____ with a friend

____ with a nurse

____ other (please specify) _____

22. Were you encouraged to touch your baby on your first visit to the intensive care nursery?

____ yes ____ no

If yes, who encouraged you? _____

23. Have you touched your baby?

____ yes ____ no

If yes, when did you first touch your baby? _____

_____

Describe this experience: _____

_____

24. How often do you see yourself visiting your baby?

____ every day ____ once a week

____ about every 2 days ____ unable to visit

____ other (please specify): _____

25. When you visit the neonatal intensive care nursery, what do you do with your infant? (e.g. look at, talk to, touch, feed, hold, etc.)

_____

_____

26. How would you rate your understanding of your infant's condition and treatment(s)?

____ very good ____ good ____ fair ____ poor ____ very poor

The following questions (#27 to 34) refer to your present family situation.

27. Did your wife work during her pregnancy?

____ yes ____ no

If yes, was she employed:

____ full time for how long? _____

____ part time for how long? _____

28. Does your wife plan to work now that the baby is born?

____ yes ____ no ____ undecided

If yes, please indicate:

____ full time ____ part time

29. Number of years living with your wife?

____ less than 1 ____ 1-2 ____ 3-4 ____ more than 4

30. Please indicate your highest level of education completed:

____ grade school ____ trade school

____ high school ____ university

____ college ____ post graduate

31. Annual Family Income (1982)

____ less than $15,000 ____ $30,001 - $45,000

____ $15,001 - $30,000 ____ more than $45,000

32. Your present occupation: _____

33. Your year of birth: _____

34. Additional comments (e.g., any feelings you may have about your experience of becoming a father, or what has been helpful or not helpful to you): _____

_____

_____

_____

_____

Thank you very much for your cooperation! Date: _____

RESEARCH QUESTIONNAIRE: PART II

INSTRUCTIONS:

The following are statements about attitudes on becoming a father. Please indicate your degree of agreement or disagreement by circling the answer that best represents your attitudes. It is important that you answer every question and that you not discuss the questionnaire with your wife, relatives, etc. until you have completed it.

KEY: SA = STRONGLY AGREE; A = AGREE; D = DISAGREE;
SD = STRONGLY DISAGREE; U = UNCERTAIN

1.	Being a father is a happy experience for me.	SA	A	D	SD	U
2.	My baby has some features like his/her mother.	SA	A	D	SD	U
3.	My baby looked beautiful to me at first.	SA	A	D	SD	U
4.	My baby seems to have a personality of his/her own.	SA	A	D	SD	U
5.	I am often in the way when I visit my baby.	SA	A	D	SD	U
6.	My baby has some features like mine.	SA	A	D	SD	U
7.	I am somewhat fearful of helping care for my baby when he/she is so small.	SA	A	D	SD	U
8.	I would not change anything about my baby.	SA	A	D	SD	U
9.	Touching my baby makes me feel more like he/she is mine.	SA	A	D	SD	U
10.	My baby needs a lot of attention from me.	SA	A	D	SD	U
11.	I am a great source of support for my wife.	SA	A	D	SD	U
12.	It is difficult to love this baby so soon.	SA	A	D	SD	U
13.	I am afraid I might hurt my baby when I touch him/her.	SA	A	D	SD	U
14.	My baby needs a lot of attention from my wife.	SA	A	D	SD	U

15.	My wife knows more about babies than I do.	SA	A	D	SD	U
16.	My baby looked ugly to me at first.	SA	A	D	SD	U
17.	Helping my wife with our baby makes my adjustment to the baby a lot easier.	SA	A	D	SD	U
18.	I feel that I have failed because my baby was born prematurely.	SA	A	D	SD	U
19.	My baby is still quite ill.	SA	A	D	SD	U
20.	I am not afraid to hold my baby.	SA	A	D	SD	U
21.	I don't feel like a father to this baby yet.	SA	A	D	SD	U
22.	My wife does a better job caring for my baby if I am not involved.	SA	A	D	SD	U
23.	I do not have a close relationship with my baby.	SA	A	D	SD	U
24.	I am as involved in my infant's care as is my wife.	SA	A	D	SD	U
25.	I have doubts about whether I will be a good father to my baby.	SA	A	D	SD	U
26.	Since my baby's birth, I have had little time for myself.	SA	A	D	SD	U
27.	It is not as important for me to visit our baby as it is my wife.	SA	A	D	SD	U
28.	My baby looks like all other babies.	SA	A	D	SD	U
29.	I get a great deal of pleasure from touching my baby.	SA	A	D	SD	U
30.	As long as my wife takes care of our baby, it really is not necessary for me to do so.	SA	A	D	SD	U
31.	My baby's birth has brought my wife and I closer together emotionally.	SA	A	D	SD	U
32.	Sometimes I wonder if my baby's prematurity will have any effects later.	SA	A	D	SD	U
33.	I have gained confidence in touching my baby since his/her birth.	SA	A	D	SD	U

34. It will be easier for me to feel close to my baby when he/she is no longer in the intensive care nursery. SA A D SD U

35. My wife thinks I have been supportive since our baby's birth. SA A D SD U

36. My wife needs a lot of support from me right now. SA A D SD U

APPENDIX II

DEMOGRAPHIC DATA SHEET

MOTHER:

Type of delivery: ____ caesarian section
____ vaginal

Anesthesia: yes ____ no ____

Analgesia: yes ____ no ____

INFANT:

Birthweight: Date of Birth: _____

Gestational age:

Sex: male ____ female ____

Apgar score at: 1 minute ____
5 minutes ____

Diagnosis at birth:

Neonatal Environment:

Number of days spent in: open crib ____
isolette ____
overhead radiant heater ____

Number of days oxygen received via: none ____
isolette ____
oxyhood ____
nasal CPAP ____
mechanical ventilation ____

Number of days fed: intravenously ____
orally: bottle ____
breast ____
gavage ____
intravenously and orally ____

Number of days on: phototherapy ____
monitors ____
other ____

Medications:

APPENDIX III

INFORMED CONSENT FORM

This is to certify that I, _____ have agreed to participate in a study to be conducted by Marilyn MacArthur, a Master of Nursing Candidate of the University of Alberta, on attitudes of first time fathers of premature infants about becoming fathers. The study will help nurses in the intensive care nursery to understand the needs of new fathers at this important time of childbirth.

It is my understanding that:

1. I will be given a questionnaire made up of two parts concerning attitudes about becoming a father which I am to complete and return by _____, in the self-addressed, stamped envelope provided.
2. My participation in the study is voluntary. I may withhold answers to any questions and may withdraw from the study at any time without any jeopardy to the care my baby, myself, or my family will receive.
3. My infant's hospital records will be used to gather information for this study. However, such information and any other information collected for this study will be treated confidentially. My identity will be protected through the use of code numbers instead of names on the data.
4. My name and/or the name of any of my family members will not appear in any research report.
5. I may not necessarily directly benefit from participating in this study, but may find it helpful in understanding my feelings about becoming a father and having the opportunity to express them.
6. I have read the foregoing and agree to participate in the study.

_____	_____
Father's signature	Date
_____	_____
Mother's signature	Date
_____	_____
Witness	Date
_____	_____
Investigator	Date

THE UNIVERSITY OF ALBERTA

FACULTY OF NURSING

CLINICAL SCIENCES BUILDING
EDMONTON, CANADA T6G 2G3

Dear New Father:

I am conducting a study on first time fathers of premature infants and their attitudes on becoming a father. I would greatly appreciate your taking a few minutes to complete the following questionnaire, of two parts: I. Demographic Data, and II. Attitudes on Becoming a Father.

Thank you for your cooperation. Please complete the questionnaire yourself as the study is trying to measure the attitudes of fathers. Your assistance in this study may help determine the needs of new fathers of premature infants and aid nurses in the intensive care nursery with their care of new parents and infants.

Again, my appreciation for taking the time to help us help new fathers and their families.

Very sincerely,

Marilyn MacArthur
Master of Nursing Candidate
University of Alberta